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ABSTRACT

The findings of a study of the Title II-B program of the Higher Education Act of 1965 are summarized. The program provides grants to institutions of higher education to assist them in training individuals in the principles and practices of library and information sciences (LIS). The results of the first four years of the Title II-B program are evaluated. The objectives of the study were to collect and analyze data on: (1) the characteristics, academic status, and employment status of the fellowship recipients; (2) procedures used by LIS institutions for the application, review and selection of fellowship recipients; (3) the proportion of program-supported students to the number of qualified applicants who would be eligible under an expanded program; and (4) results of the program as measured by rates of degree completion and positions held after completion and by LIS faculty evaluation. The study results strongly suggest that the Title II-B program is successful in its objectives. Many deans also see the Title II-B program as having the indirect benefit of greatly improving the status of library education and librarianship in the views of people outside the library profession. (NH)

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OVERVIEW OF THE LIBRARY FELLOWSHIP PROGRAM

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OVERVIEW OF THE LIBRARY FELLOWSHIP
TITLE II-B PROGRAM

I. STUDY OBJECTIVES AND DESIGN

Objectives
Study Design
Data Collection

II. THE TITLE II-B FELLOWSHIP PROGRAM IN OPERATION

Enrollment
Selection of Awardees

III. PROGRAM CHARACTERISTICS AND BACKGROUND OF FELLOWSHIP RECIPIENTS

Characteristics of the Program
Characteristics of Title II-B Fellowship Recipients

IV. PROGRAM COMPLETION BY FELLOWSHIP RECIPIENTS

Withdrawal from the Program
Completion of Master's and Post-Master's Studies
Correlates of Successful Completion
of Master's and Post-Master's Studies
Completion of Doctoral Studies
Progress Toward the Doctoral Degree

V. EMPLOYMENT CHANGES

Previous Employment of Fellowship Recipients
Post-Program Employment
Employment Changes for Master's Students
Employment Changes Among Post-Master's and Doctoral Students

VI. CONCLUSION

APPENDIX A

Administrative Information Questionnaire
Student Information Questionnaire
Cover letters:
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APPENDIX B

ADDITIONAL COMMENTS GIVEN BY THE DEANS CONCERNING THE IMPACT
OF THE TITLE II-B PROGRAM

1. STUDY OBJECTIVES AND DESIGN

This report summarizes the findings of a study of the Title II-B program of the Higher Education Act of 1965, which provides grants to institutions of higher education to assist them in training individuals in the principles and practices of the library and information sciences (LIS). Since fiscal year 1966 when the program started, the Office of Education has provided over 1,500 fellowship grants to students in LIS, and has assisted 56 schools in defraying the cost of such courses of training in librarianship.

Objectives

The present study was undertaken to evaluate the results of the first four years of the Title II-B program. The objectives of the study were to collect and analyze data on (1) the characteristics, academic status, and employment status of Title II-B fellowship recipients (Fellows); (2) the procedures used by each of the participating LIS institutions in the application, review, and selection process for fellowship recipients; (3) the proportion of the total LIS enrollment presently supported by the program and the number of qualified librarianship applicants who would be eligible under an expanded program; and (4) the results of the program, insofar as they can be measured through rates of degree completion and positions held by Fellows after program completion, and by judgmental evaluation of the program by the LIS deans.

Study Design

Two questionnaires were prepared and pretested with deans of four LIS Institutions.¹ Both of the questionnaire forms were to be completed by the dean's office. The Administrative Information Questionnaire contained questions regarding total LIS enrollment and Title II-B fellowship enrollment, and selection criteria used by the deans in awarding the Title II-B fellowships and other grants. The Student Information Questionnaire (which was to be completed for each Fellow) contained questions regarding demographic and academic background of each Fellow, his pre- and post-program employment, number of publications, etc.

Data Collection

At the beginning of November, 1969, the deans of 56 LIS Institutions were contacted and asked to participate in the study by completing Administrative and Student Information Questionnaires. The deans were also requested to return a stamped and self-addressed postcard indicating the expected completion date. Within a month after the initial mailout, completed questionnaires were obtained from one-fifth of the institutions, while over two-thirds of the deans returned postcards promising cooperation. All other deans were contacted by phone (and in some cases by mail) and by the end of March, 1970, Student Information Questionnaires from all of the institutions, and Administrative Information Questionnaires from all but one of the institutions were obtained. However, the Administrative Information Questionnaires, in particular, contained numerous "no answers" or "estimated" figures

¹See Appendix A for copies of questionnaires used in the study.

which reduced the usefulness of the data considerably. Basically, the reasons for failing to provide complete information on the questionnaires can be attributed (a) to the problems associated with university or state policies on release of information from student records, and (b) to the fact that some of the questions asked, such as the publications or GRE scores of the Fellows, were simply not available to all of the deans. In addition, differences in record-keeping practices of different schools, in admission policies, in academic schedules, etc., all reduced the comparability of the data. Finally, there was some reluctance on the part of the deans to cooperate fully with the study due to the general feeling that a majority of the questions asked in the survey questionnaires were duplicating those already answered by the deans on the "Application for Grant" and "Annual Narrative Report" forms completed for OE use each year.

II. THE TITLE II-B FELLOWSHIP PROGRAM IN OPERATION

During the first four years of the Title II-B fellowship program, the number of participating U.S. institutions has doubled, while the number of fellowships granted has increased almost ten times. However, it is difficult to determine whether there has been a parallel increase in the number of students applying for LIS programs in the last four years.

Enrollment

Table 1 presents the totals obtained for each year from the Administrative Information Questionnaire for LIS and Title II-B enrollment. The interpretation of these totals requires caution insofar as most of the totals contain some estimates; secondly, information is not complete for all schools. Table 2 presents "standardized" totals for each school, i.e., frequencies divided by the number of institutions supplying the information. It is interesting to note that while there appears to be a slight decline in the number of students applying (and being admitted) to LIS institutions, the number of students being considered for (and granted) Title II-B fellowships has increased since 1966.

Figure 1 presents the relation between the proportion of students who get admitted to LIS institutions, those who request financial aid, and those who receive the Title II-B fellowship. Again it is necessary at this point to note the difficulty of drawing any conclusive results from data made available. Schools differ very widely in their procedures of admissions, in academic schedules, in their definitions of who constitutes a full-time or part-time student, and particularly in their handling

TABLE 1
ESTIMATES OF LIS AND TITLE II-B ENROLLMENT

	1966-67	1967-68	1968-69	1969-70
<u>Total Library Science Enrollment</u>				
Number of formal applications received	5432 (24) ^a	7257 (33)	9469 (44)	9656 (46)
Number of students accepted.	3524 (25)	4738 (32)	6366 (45)	6084 (49)
Number of newly-entering students enrolled	2706 (27)	3353 (34)	3926 (43)	4270 (49)
Newly-entering students requesting financial aid.	980 (20)	1414 (26)	2010 (36)	2342 (42)
Total enrollment, i.e. newly-entering and continuing students.	6915 (40)	8435 (46)	9684 (55)	9364 (55)
<u>HEA Title II-B Fellowship Enrollment</u>				
Number of newly-entering students considered for HEA Title II-B Fellowships each year.	430 (16)	1094 (25)	1475 (43)	2092 (50)
Number of HEA Title II-B Fellowships offered to newly-entering students each year.	120 (23)	426 (34)	595 (49)	514 (54)
Number of students who rejected HEA Title II-B Fellowships	3 (21)	21 (31)	46 (44)	57 (53)
Number of HEA Title II-B Fellows who later resigned from the program. . .	2 (23)	18 (34)	31 (49)	7 (49)

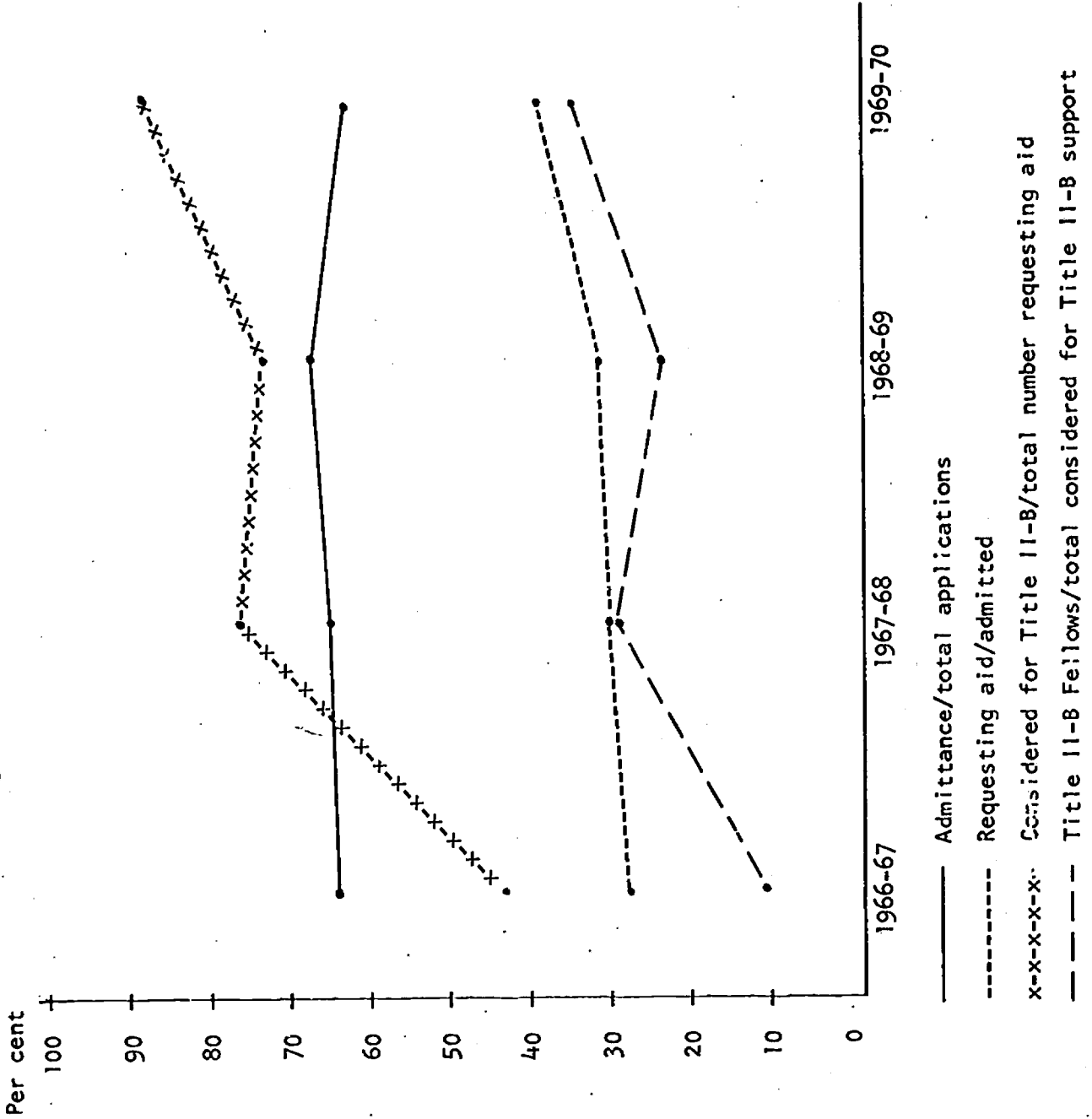
^aNumber of LIS institutions supplying information.

TABLE 2
 ENROLLMENT ESTIMATES PER LIS INSTITUTION^a
 (In Percentages)

	1966-67	1967-68	1968-69	1969-70
<u>Total Library and Information Science Enrollment</u>				
Number of formal applications received	226.3	219.9	215.2	209.9
Number of students accepted.	147.9	148.0	141.5	124.2
Number of newly-entering students enrolled	100.2	98.6	91.3	87.1
Newly-entering students requesting financial aid.	49.0	54.4	55.8	55.8
Total enrollment, i.e. newly-entering and continuing students.	172.9	183.4	176.1	170.3
<u>HEA Title II-B Fellowship Enrollment</u>				
Number of newly-entering students considered for HEA Title II-B Fellowships each year.	26.9	43.8	34.3	41.8
Number of HEA Title II-B Fellowships offered to newly-entering students each year.	5.2	12.5	12.1	9.5
Number of students who rejected HEA Title II-B Fellowships1	.6	1.0	1.1
Number of HEA Title II-B Fellows who later resigned from the program.1	.5	.6	.1

^aThese figures are obtained by dividing the total frequencies in each cell (per Table 1) by the number of institutions supplying the information.

Figure 1.--Proportion of LIS students.



of financial aid requests. Some schools allow students to complete aid applications while they apply for admission; some allow students to apply for aid only after they have been accepted, and some, particularly the small departments, do it very informally, without formal applications. Consequently, the proportions, at best, represent approximations. With these considerations in mind, however, it would appear that nearly two-thirds of all students who submit "formal" applications are admitted to LIS institutions. One-fifth of the pool of applicants, or one-third of the admitted students, request financial aid (see also Figure 2). Three-fourths of the students applying for financial aid are considered for Title II-B fellowships, and, finally, one-third of the students considered for Title II-B fellowships receive the fellowship. Title II-B Fellows comprise about 5 per cent of the total number of students applying for admission (or 8% of students admitted)--rather small percentages, certainly with room to grow.

The rates of rejections or resignation are very low, with approximately 5 to 8 per cent of the students rejecting the award before enrolling, 2 to 4 per cent resigning from the program after enrolling.

Table 3 presents the current number of fellowships made available for master's, post-master's, and doctoral programs for each academic year (based on data from the Student Information Questionnaires),² and the additional number of fellowships which the deans state they could have used without lowering the quality of students in the program. Apparently, the master's program is very popular and could easily accommodate additional fellowships.

²The data obtained from the Administrative Information Questionnaire on the total number of Title II-B fellowships awarded are incomplete due to missing data from one institution and "no answers" from others.

Figure 2.--Relationships between pool of applicants and Title II-B Fellows based on totals of four years of enrollment.

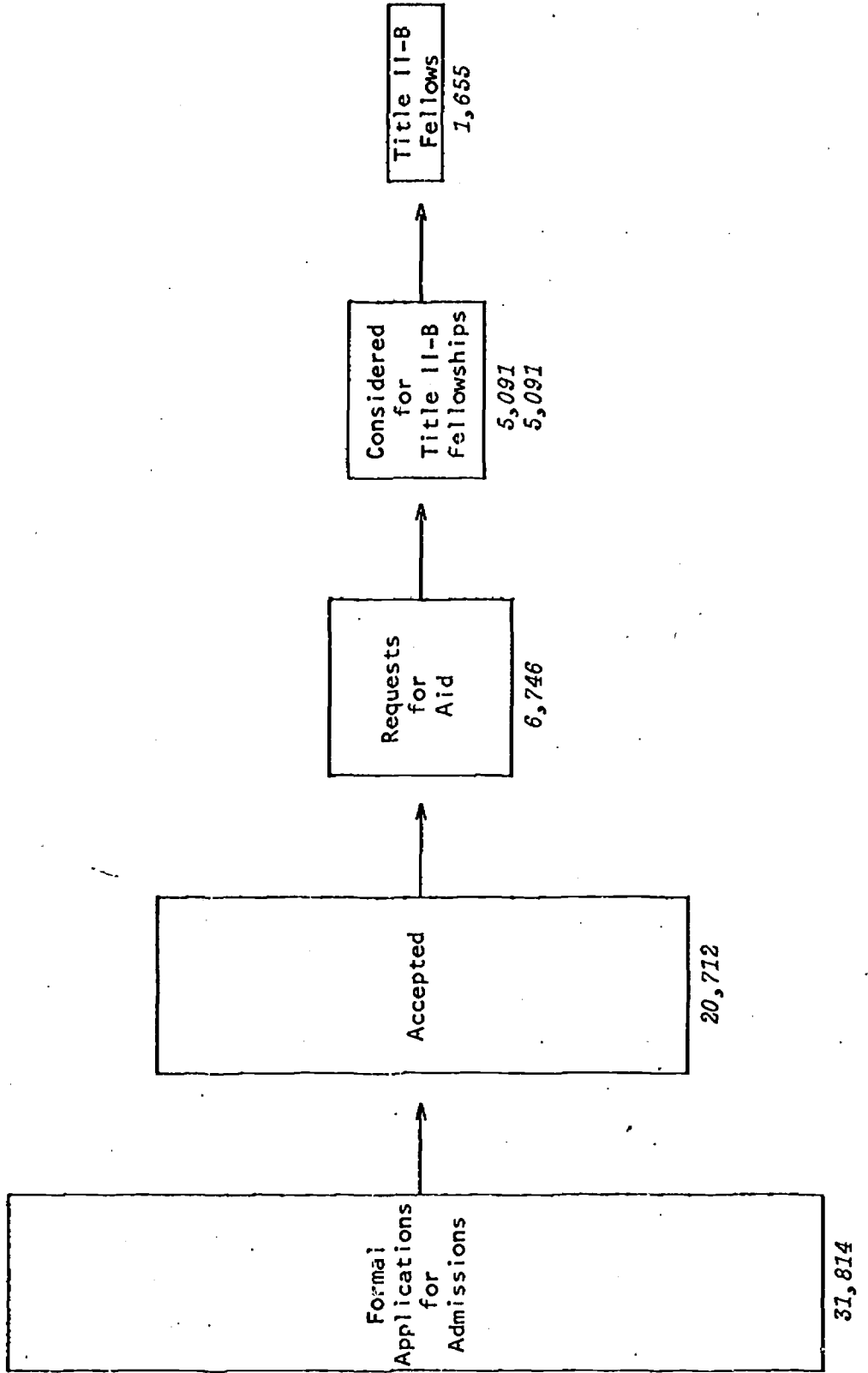


TABLE 3

NUMBER OF TITLE II-B FELLOWS IN EACH PROGRAM AND NUMBER OF ADDITIONAL STUDENTS THAT COULD HAVE BEEN ACCOMMODATED WITHOUT LOWERING THE QUALITY OF STUDENTS ACCEPTED

Type of Fellowships	1966-67	1967-68	1968-69	1969-70
<u>Current Totals for Title II-B Fellowships</u>				
Master's	62	317	488	376
Post-Master's	13	46	31	24
Doctoral	52	79	69	70
<u>Additional Title II-B Fellowships Desired</u>				
Master's	299	426	702	942
Post-Master's	8	18	76	98
Doctoral	31	44	55	80

However, the Title II-B program is not the only source of financial aid available to LIS students (Table 4). The number of financial resources depends largely on the size of the school, and types of support vary greatly from one school to another. When all schools are considered as a total, it appears that, with the exception of the first year of the program, Title II-B fellowships constitute about half of the grants or awards that are available in LIS institutions. The importance of the Title II-B program is manifested in the deans' enthusiasm toward the program.

TABLE 4

NUMBER OF TITLE II-B^a AND OTHER GRANTS AWARDED EACH YEAR

Grants	Award Year							
	1966-67		1967-68		1968-69		1969-70	
	Awards	Institutions	Awards	Institutions	Awards	Institutions	Awards	Institutions
Title II-B	127	56	442	56	588	56	470	56
Other	523	31	645	39	892	52	991	52

^aThe number of Title II-B fellowships presented here was obtained from the Student Information Questionnaire and differs from the number presented in Table 1, which was based on the Administrative Information Questionnaire.

Selection of Awardees

We asked the deans about the selection of students for Title II-B awards and for other awards, and whether or not there was a difference in the evaluation and selection procedures. Over half (56.4%) of the deans reported that there was absolutely no difference in the way they evaluated and selected students for Title II-B or for other awards. However, some of the state scholarships, for instance, could be awarded to local students only, while the Title II-B program allowed the deans to compete for out-of-state students. Generally, because of the large size of the grant and also because of the rather strict contractual obligations (time-wise), only top contenders are awarded the Title II-B fellowship, although in some cases the financial need of the applicant is also taken into consideration.

Table 5 presents the proportion of deans who mentioned that each factor was important in the evaluation and selection of grantees. An

overwhelming majority of the deans considered undergraduate grades as very important; however, the point is generally made that the importance attached to undergraduate grades is always a function of the reputation and the quality of the undergraduate institution. Similarly, although great importance is attributed to references, the weight attached to each depends on whether or not the dean knows the individual used as a reference.

TABLE 5
FACTORS CONSIDERED IMPORTANT IN SELECTING STUDENTS
FOR TITLE II-B AND OTHER AWARDS
(In Percentages)

Factors	Title II-B	Other
Undergraduate grades	98.2	89.1
References	78.2	72.7
Graduate record exams	74.5	69.1
Financial need	45.4	49.1
Curriculum type	38.2	32.7
Professional promise	30.9	21.8
Previous academic preparation	29.1	23.6
Interview	25.4	18.2
Career objectives	18.2	16.4
Student's character	14.5	-
Work experience	10.9	9.1
Library experience	9.1	7.3
Miller Analogies Test	7.3	7.3
Minority group representation	7.3	3.6
Age	5.4	1.8
Geographical area representation	5.4	3.6
Leadership potential	5.4	-
Work interest in LIS	3.6	1.8
Special skills	3.6	3.6
(Base N)	(55)	(55)

Graduate record exams were mentioned by about 70 per cent of the deans as important, although only half could supply the GRE scores of Title II-B fellows. Financial need of the candidate,³ professional promise, career objectives, and interview impressions all seem to carry considerable weight in the evaluation and selection of both Title II-B and other aid candidates.

A great majority of the deans are very enthusiastic toward the Title II-B program. Table 6 presents the responses obtained regarding

TABLE 6
IMPACT OR CONTRIBUTION OF THE TITLE II-B PROGRAM
(In Percentages)

	Very Great	Some	Very Small or None	NA	Total %	N
Faster program and degree completion rates	67.9	25.0	5.4	1.8	100.0	(56)
Improving the quality of students enrolled in Library Science Programs	55.4	32.1	10.7	1.8	100.0	(56)
Increasing the number of students enrolled in Library Science Programs	46.4	42.9	8.9	1.8	100.0	(56)

³The importance attached to financial need depends to some degree on the dean's perception regarding the objectives of the Title II-B program. Most deans who feel that the major purpose of the program is to recruit and prepare outstanding young men and women for faculty positions in LIS institutions or for positions of leadership in libraries and information centers are likely to de-emphasize the importance of financial need. Others feel that the program exists primarily to make it possible for applicants needing financial assistance to obtain a library education.

the impact or contribution the program has made in LIS fields. The belief is shared by most that the Title II-B program has allowed them to compete with other departments, and with other states, for better and higher-quality students than ever before, and that, as a consequence, the degree completion rates in their departments or schools have improved. Deans also feel that the duration of degree completion has been shortened due to the higher caliber of students attracted and due to the higher rates of full-time graduate work made possible by the Title II-B program. The extent to which the dean's impressions in this regard are confirmed by our data will be examined in the next sections of this report.

III. PROGRAM CHARACTERISTICS AND BACKGROUND OF FELLOWSHIP RECIPIENTS

Characteristics of the Program

The findings discussed below are based on data obtained from the Student Information Questionnaires.

By 1970, a total of 1,627 students had received Title II-B fellowships, mostly in master's programs (76.4%) and less often in post-master's (7.0%) or doctoral programs (16.6%). Of the total fellowships granted during this period, the majority were for one year's duration (Table 7). All but one of the post-master's awards were for a single year's time, as were all but two of the master's degree awards on which we have data; this information was not given, however, for more than half (54.1%) of the students with master's awards. Of the students in the doctoral program, half were given three-year awards, while about a quarter were given two-year awards and another quarter held awards of only one year's length.

As shown by Table 7, only a small proportion of the total awards were given during the first year of the program while the rest were somewhat evenly distributed among the other years of the program's existence. The majority of the awards were given to students attending schools with accredited LIS programs.⁴ The few awards granted for non-accredited programs were primarily for master's degree study.

⁴By 1970, 75 per cent of the participating institutions had accredited LIS programs.

15

TABLE 7

TITLE II-B FELLOWSHIPS BY TYPE OF PROGRAM, DURATION OF AWARD, YEAR OF AWARD, AND ACCREDITATION OF LIS INSTITUTION
(In Percentages)

Characteristic	Fellowships			Total
	Master's	Post-Master's	Doctoral	
<u>Distribution of Awards by Program</u>	76.4	7.0	16.6	100.0
(N)				(1627)
<u>Duration of Awards</u>				
One year	99.5	99.1	25.6	78.6
Two year	0.4	0.9	23.0	6.8
Three year	0.2	-	51.3	14.6
Total %	100.0	100.0	100.0	100.0
(N)	(570)	(113)	(269)	(952)
<u>Year of Award^a</u>				
1966	5.0	11.4	19.2	7.8
1967	25.5	40.4	29.2	27.2
1968	39.2	27.2	25.6	36.1
1969	30.2	21.1	25.9	28.9
Total %	100.0	100.0	100.0	100.0
(N)	(1243)	(114)	(270)	(1627)
<u>Proportion Awarded in Schools with Accredited LIS Programs</u>				
	93.5	100.0	99.2	94.9
(N)	(1243)	(114)	(270)	(1627)

^aWhen more than a one-year award, refers to first year of award.

^bThe small percentages indicating the allocation of fellowships in the master's program for two or three years are probably due to clerical errors.

Characteristics of Title II-B Fellowship Recipients

Definite differences exist in the type of students recruited into each of the three library science programs supported by the Title II-B fellowship (Table 8). Those receiving awards for master's study were typically women in their twenties, of whom more than half were not married. Recipients of post-master's awards were also predominantly women (72.8%) but were older, with more than half over forty and another third in their thirties. Over half of these post-master's students were married. The doctoral students, on the other hand, were predominantly men (61.9%), and usually married (63.8%), of whom about half were in their thirties and only a third were over forty. In all programs, however, less than 10 per cent of the enrollment was non-white--with the smallest proportion of non-white students in doctoral programs.

Comparing these findings to a recent study of Title IV (NDEA) graduate students who enrolled in doctoral programs in 1960 or 1961,⁵ we find that Title II-B fellows were more likely to be women students and less likely to be married than the graduate students supported by the NDEA program (see Table 9). Those in the master's program were younger than the typical NDEA fellow while the post-master's students were generally older than NDEA fellows. A larger proportion of LIS awards than NDEA awards were given to non-white applicants, although the number of cases involved in both groups is very small.

⁵See Laure M. Sharp, Barton Sensenig, and Lenore Reid, Study of NDEA Title IV Fellowship Program--Phase I (BSSR, March, 1968) and Laure M. Sharp and Engin I. Holmstrom, Study of NDEA Title IV Fellowship Program--Phase II (BSSR, July, 1970).

TABLE 8

DEMOGRAPHIC CHARACTERISTICS OF TITLE II-B FELLOWS
(In Percentages)

Characteristic	Students			Total
	Master's	Post-Master's	Doctoral	
<u>Sex</u>				
Men	22.3	27.2	61.9	29.2
Women	77.7	72.8	38.1	70.8
Total % (N)	100.0 (1243)	100.0 (114)	100.0 (270)	100.0 (1627)
<u>Race</u>				
White	85.3	85.1	87.4	85.6
Black	6.6	6.1	3.3	6.0
Other	1.0	1.8	0.4	1.0
No answer	7.1	7.0	8.9	7.4
Total % (N)	100.0 (1243)	100.0 (114)	100.0 (270)	100.0 (1627)
<u>Age</u>				
21-25 years	41.4	2.6	-	31.8
26-30	27.9	13.3	16.8	25.0
31-35	10.6	16.8	25.0	13.4
36-40	8.8	15.9	24.2	11.9
41-45	6.0	20.4	18.6	9.2
46-50	3.6	12.4	11.9	5.6
51-55	1.2	11.5	3.4	2.3
56 years or older	0.4	7.1	-	0.8
Total % (N)	100.0 (1227)	100.0 (113)	100.0 (268)	100.0 (1608)
Median Age	27.0	40.8	37.2	29.1
<u>Marital Status</u>				
Married	43.1	54.0	63.8	47.2
Not married	56.9	46.0	36.2	52.8
Total % (N)	100.0 (1192)	100.0 (113)	100.0 (246)	100.0 (1551)

TABLE 9
 DEMOGRAPHIC CHARACTERISTICS OF NDEA TITLE IV FELLOWS^a
 (In Percentages)

Characteristic	Fellows	
	1960-61	1961-62
<u>Sex</u>		
Men	86.5	88.2
Women	13.5	11.8
Total % (N)	100.0 (1039)	100.0 (1057)
<u>Race</u>		
White	98.2	99.5
Black	0.6	0.2
Other	1.2	0.3
Total % (N)	100.0 (1018)	100.0 (1041)
<u>Age</u>		
20-29 years	1.2	10.4
30-39	89.2	81.0
40-49	8.0	7.1
50-59	1.2	0.9
60 years and over	0.5	0.5
Total % (N)	100.0 (1037)	100.0 (1052)
Median Age	35.0	34.4
<u>Marital Status During First Year of Graduate Study</u>		
Married	47.2	50.2
Not Married	52.8	49.8
Total % (N)	100.0 (1024)	100.0 (1032)

^aStudy of NDEA Title IV Fellowship Program--Phase II (BSSR, July, 1970), Tables 11-2 and 11-5.

Students in the three programs of study differ also in the extent to which they had previous experience in library work (see Table 10). Only a third of the students with master's awards had worked as librarians before entering the program, in contrast to the students with post-master's and doctoral awards, of whom more than two-thirds held library positions before receiving their awards.

The great majority of the master's students entered the program with no previous graduate degree (see Table 10). Quite a few of those in the post-master's or doctoral programs held more than one advanced degree, usually two master's degrees, before receiving the LIS award.

Students in the three programs had somewhat similar undergraduate backgrounds (see Table 10). Undergraduate majors were most often in the humanities and, to a lesser degree, in social sciences. Very few had taken their bachelor degrees in natural science or business and a small proportion had majored in education. There were also very few LIS majors. At best, only 10 per cent of those in the post-master's program reported LIS as their major. Grade-point averages for undergraduate work were also similar for the three groups, although somewhat more of the master's students reported averages of A and A+ and more of the post-master's students had averages of B or less. Post-master's students also reported lower GRE scores than those of master's or doctoral students. From these data, one can infer that the quality of students now being recruited into library programs is indeed superior to what it was ten or more years ago. Overall, however, the LIS fellows had GRE scores and academic averages that were somewhat lower than those of the doctoral students holding NDEA fellowships (see Table 11).

TABLE 10

ACADEMIC AND EMPLOYMENT BACKGROUND OF
TITLE 11-B FELLOWS
(In Percentages)

Characteristic	Students			Total
	Master's	Post-Master's	Doctoral	
<u>Pre-Program Employment</u>				
In school or not working	17.3	10.4	2.6	14.3
Library positions	34.2	67.9	76.3	43.8
Other positions	48.6	21.7	21.2	41.9
Total % (N)	100.0 (1077)	100.0 (106)	100.0 (240)	100.0 (1423)
<u>Previous Graduate Degrees</u>				
None	87.5	7.9	3.3	68.0
M. A.	11.3	81.6	70.0	26.0
More than one M. A.	0.2	10.5	25.9	5.2
M. A. and library certificate	-	-	0.4	0.1
Other advanced degrees	1.0	-	0.4	0.8
Total % (N)	100.0 (1242)	100.0 (114)	100.0 (270)	100.0 (1626)
<u>Undergraduate Major</u>				
Library science	3.0	11.6	1.5	3.3
Humanities	45.8	38.4	46.7	45.4
Social Science	31.5	30.4	32.9	31.7
Natural Science	2.2	-	2.9	2.1
Education	10.1	15.2	7.8	10.1
Business	0.3	-	0.7	0.4
Other	7.1	4.5	7.4	7.0
Total % (N)	100.0 (1238)	100.0 (112)	100.0 (270)	100.0 (1620)

TABLE 10--Continued

Characteristic	Students			Total
	Master's	Post-Master's	Doctoral	
<u>Undergraduate Average</u>				
A or A+	17.8	6.9	9.8	15.9
A-	21.6	15.8	22.3	21.3
B+	24.9	22.8	31.7	25.8
B	25.6	33.7	20.5	25.4
B- or C	10.1	20.8	15.6	11.7
Total % (N)	100.0 (1132)	100.0 (101)	100.0 (224)	100.0 (1457)
<u>GRE Scores</u>				
Verbal:				
800 or more	2.9	-	2.6	2.7
700-799	21.1	8.3	27.2	21.2
600-699	34.9	31.3	35.1	34.7
500-599	27.6	45.8	23.7	28.1
400-499	8.0	14.6	9.6	8.6
Under 400	5.4	-	1.8	4.6
Total % (N)	100.0 (648)	100.0 (48)	100.0 (114)	100.0 (810)
Median Score	625	577	642	624
Quantitative:				
800 or more	0.5	-	2.6	0.7
700-799	5.7	2.1	4.4	5.3
600-599	15.4	10.4	22.8	16.2
500-599	36.2	22.9	27.2	34.2
400-499	26.5	39.6	17.5	27.1
Under 400	15.7	25.0	25.4	16.5
Total % (N)	100.0 (649)	100.0 (48)	100.0 (114)	100.0 (811)
Median Score	521	463	525	518

TABLE 11

UNDERGRADUATE AVERAGE AND GRE SCORES
OF NDEA TITLE IV FELLOWS^a
(In Percentages)

Grade Letter Average and GRE Score	Recipients	
	1960-61	1961-62
<u>Undergraduate Average</u>		
A or A+	22.2	20.4
A-	28.8	28.7
B+	30.1	29.1
B	9.2	11.1
B- or C	9.8	10.7
Total % (N)	100.0 (1033)	100.0 (1046)
<u>GRE Scores</u>		
Verbal:		
800 or more	17.9	14.2
700-799	27.5	28.8
600-699	27.1	32.8
500-599	20.8	18.2
499 or less	6.7	6.0
Total % (N)	100.0 (240)	100.0 (302)
Quantitative:		
800 or more	20.0	22.2
700-799	23.0	26.3
600-699	28.9	23.9
500-599	17.4	17.2
499 or less	10.6	10.4
Total % (N)	100.0 (235)	100.0 (297)

^a Study of NDEA Title IV Fellowship Program--Phase II (BSSR, July, 1970), Table 11-11.

IV. PROGRAM COMPLETION BY FELLOWSHIP RECIPIENTS

Withdrawal from the Program

Our data show that very few fellows had withdrawn from the program, whether for academic or other reasons. As shown by Table 12, withdrawal was not significantly related to either age, sex, marital status, undergraduate average, employment record or prior graduate experience of the students. Numerically, however, most of the 51 students who withdrew were from the master's program and a large proportion were master's students given awards for the 1968-69 year, the last full academic year for which we have information. Possibly, the deans who supplied this information had less complete records on the withdrawals from earlier years.

Completion of Master's and Post-Master's Studies

Our findings indicate that a very large proportion of the students in the program had successfully completed their studies. Of the 867 students enrolled in the master's program during 1966, 1967 or 1968,³ as many as 82.4 per cent had received master's degrees (see Table 13). Also, in most cases the master's students had been able to attain the degree within a year; only 7.5 per cent of those who graduated received their degrees more than a year after entering the program. Even so, master's students enrolled in 1968 showed a lower rate of completion than students enrolled in the first two years of the program. Presumably,

³ Less than a year elapsed by the time of data collection for those enrolled in 1969 and thus they are not included in the discussion here. Except for three students who withdrew, all 1969 master's students were "in school" at the time of the study. Also, all of the post-master's and doctoral students with 1969 awards were "in school."

TABLE 12

RATE OF WITHDRAWAL FROM TITLE 11-B PROGRAMS
BY SELECTED BACKGROUND VARIABLES
(Per cent in each category who withdrew from any program)

Variable	Rate of Withdrawal	(Base Number)
<u>Age</u>		
21-30	2.5	(913)
31-40	3.4	(407)
41-50	4.6	(238)
51 and over	4.0	(50)
<u>Sex</u>		
Men	4.4	(475)
Women	2.6	(1152)
<u>Marital Status</u>		
Married	3.1	(732)
Not married	2.8	(819)
<u>Undergraduate Average</u>		
A or A+	3.0	(231)
A-	3.2	(310)
B+	3.2	(376)
B	3.0	(370)
B- or C	1.2	(170)
<u>Preprogram Employment</u>		
In school or not working	4.4	(203)
Library positions	1.9	(623)
Other positions	3.5	(597)
<u>Previous Graduate Degrees</u>		
None	2.7	(1105)
One degree or more	4.0	(521)

then, many other 1968 students will still graduate. In fact, 9.2 per cent of the 1968 students were still in school at the time our data were collected.⁴ Further, 8.0 per cent of the 1968 students and 9.5 per cent of the 1967 students had completed tenure under the master's program without graduating. These students are likely to have completed the coursework requirements of their programs and may now be engaged in writing their master's papers on a part-time basis; some of these students might also be expected to graduate.

TABLE 13
PRESENT ACADEMIC STATUS OF MASTER'S STUDENTS IN TITLE 11-B PROGRAMS
BY YEAR OF AWARD
(In Percentages)

Academic Status	Students			Total
	1966	1967	1968	
In school	3.2	0.6	9.2	5.6
Completed award tenure	1.6	9.5	8.0	8.1
Graduated	91.9	87.1	78.1	82.4
Withdrew from the program	3.2	2.8	4.7	4.0
Total %	100.0	100.0	100.0	100.0
(N)	(62)	(317)	(488)	(867)

An even higher rate of completion is shown for the post-master's students (see Table 14). Almost all (95.6%) of the students receiving fellowships in 1966, 1967 or 1968 had completed their program of study,

⁴Data were collected during the 1969-70 academic year.

with only slight variation by year of enrollment. The record is marred only by two students who are still in school and two students who withdrew from the program for non-academic reasons.

TABLE 14
PRESENT ACADEMIC STATUS OF POST-MASTER'S STUDENTS IN
TITLE II-B PROGRAMS BY YEAR OF AWARD
(In Percentages)

Academic Status	Students			Total
	1966	1967	1968	
In school	-	2.2	3.2	2.2
Completed program	[13]*	95.6	93.5	95.6
Withdrew from the program	-	2.2	3.2	2.2
Total %	-	100.0	100.0	100.0
(N)	(13)	(46)	(31)	(90)

*Too few cases to compute percentages.

Correlates of Successful Completion of Master's and Post-Master's Study

Because of an interest in discovering any factors in the background of students that contribute to academic success in a graduate library science program, we examined the impact of a number of demographic and situational variables on successful completion of study for both the master's and the post-master's students. For both groups, we considered only those who completed at least one year with fellowship support (i.e., those enrolled in 1966, 1967 or 1968). Our findings, presented in Table 15, are essentially negative in the sense that none of the variables tested had any real effect on completion. Success in the master's program was not closely related to the age, sex, marital status, previous employment,

graduate experience, or undergraduate average of the master's students. We had sufficient cases to test only age, sex, and marital status for post-master's students, all of which also proved to be unrelated to successful completion of study.

Completion of Doctoral Studies

Judgments on completion for the 270 doctoral students who received LIS fellowships cannot be as precise, since the minimum time necessary to complete a doctoral program is subject to variation according to institutional requirements, previous graduate work of the students, and other factors.⁵ Table 16 summarizes our information on the present status of the doctoral students and highlights the fact that three-quarters of all doctoral students are still in school. Only among those receiving fellowships in 1966 were the majority no longer in school. For 1966 students, three full academic years have passed since they began their study and, in that time, 19.2 per cent had completed their work and received the doctoral degree. Another 51.9 per cent of the 1966 students had not yet graduated but had completed tenure on their awards, most of which had been three-year awards (57.7 per cent) or, less often, two-year awards (26.9 per cent).

Progress Toward the Doctoral Degree

Another measure of the academic achievement of doctoral students supported by LIS fellowships would be a record of their progress in

⁵As shown in Table 10, all but 3.3 per cent of doctoral students already held a graduate degree when they received the LIS fellowships.

TABLE 15

RATE OF COMPLETION OF MASTER'S AND POST-MASTER'S
STUDY, BY SELECTED BACKGROUND VARIABLES^a
(Per cent who completed studies in each category)

Variable	Students			
	Master's		Post-Master's	
	%	(N)	%	(N)
<u>Age</u>				
21-30 years	81.8	(565)	[11]*	(11)
31-40	83.0	(182)	96.6	(30)
41-50	87.0	(92)	90.0	(30)
51 or more	[14]*	(18)	[18]*	(18)
<u>Sex</u>				
Men	80.4	(194)	100.0	(24)
Women	82.9	(673)	93.9	(66)
<u>Marital Status</u>				
Married	86.4	(375)	93.5	(46)
Not Married	82.6	(455)	100.0	(43)
<u>Preprogram Employment</u>				
In school or not working	85.0	(140)	-	-
Library positions	88.5	(253)	-	-
Other positions	83.0	(358)	-	-
<u>Undergraduate Average</u>				
A or A+	85.3	(143)	-	-
A-	85.8	(162)	-	-
B+	88.0	(184)	-	-
B	76.6	(218)	-	-
B- or C	88.3	(77)	-	-
<u>Previous Graduate Degrees</u>				
None	82.6	(764)	-	-
One degree or more	80.4	(102)	-	-

^aRefers only to students given awards in 1966, 1967, or 1968.

*Too few cases to compute percentages.

TABLE 16

PRESENT ACADEMIC STATUS OF DOCTORAL STUDENTS IN
TITLE 11-B PROGRAMS BY YEAR OF AWARD
(In Percentages)

Academic Status	Students				Total
	1966	1967	1968	1969	
In school	21.2	72.2	85.5	100.0	73.0
Completed award tenure	51.9	12.7	11.6	-	16.7
Graduated	19.2	7.6	-	-	5.9
Withdrew from the program	7.7	7.6	2.9	-	4.4
Total %	100.0	100.0	100.0	100.0	100.0
(N)	(52)	(79)	(69)	(70)	(270)

completing each of the specific requirements for a doctoral degree.

This data is available only for the doctoral students who were still in school at the time of the study (73.0 per cent of all doctoral students) and is summarized in Table 17.

Completion of any requirement is understandably related to year of enrollment. Thus, the few 1966 students who are still in school have typically reached candidacy by completing language, course and examination requirements, and are at the point of collecting data for their dissertations.

The majority of the 1967 students (now in their third year of Title 11-B fellowship support) have also attained candidate status. Only about a third must still complete coursework or pass qualifying exams, and about 15 per cent must still meet residence and language requirements. Some of these 1967 students have settled on a dissertation topic and have begun collecting data, but very few have completed further stages of their dissertation work.

TABLE 17

PROGRESS TOWARD THE DOCTORAL DEGREE BY YEAR OF AWARD
FOR TITLE II-B DOCTORAL STUDENTS STILL IN SCHOOL
(In Percentages)

Doctoral Requirement and Present Status	Students				Total
	1966	1967	1968	1969	
<u>Coursework requirements</u>					
Not started	-	-	-	-	-
In progress	-	19.6	43.1	75.8	44.6
Completed	[7]*	69.6	46.6	9.7	42.5
Not required	[3]**	10.7	10.3	14.5	12.9
Total % (N)	- (10)	100.0 (56)	100.0 (58)	100.0 (62)	100.0 (186)
<u>Residence Requirements</u>					
Not started	-	-	-	-	-
In progress	-	12.3	54.4	91.9	51.1
Completed	[10]*	87.7	45.6	8.1	48.9
Not required	-	-	-	-	-
Total % (N)	- (10)	100.0 (57)	100.0 (57)	100.0 (62)	100.0 (186)
<u>Qualifying Examinations</u>					
Not started	-	21.2	39.2	86.8	47.0
In progress	-	11.5	25.5	3.8	12.8
Completed	[8]*	67.3	35.3	9.4	40.2
Not required	-	-	-	-	-
Total % (N)	- (8)	100.0 (52)	100.0 (51)	100.0 (53)	100.0 (164)
<u>Language Requirements</u>					
Not started	-	1.8	1.8	32.7	11.4
In progress	[2]**	11.1	30.4	34.5	25.1
Completed	[8]**	83.3	67.8	25.4	60.0
Not required	-	3.7	-	7.3	3.4
Total % (N)	- (10)	100.0 (54)	100.0 (56)	100.0 (55)	100.0 (175)

TABLE 17--Continued

Doctoral Requirement and Present Status	Students				Total
	1966	1967	1968	1969	
<u>Thesis Topic Approved</u>					
Not started	-	20.0	44.0	88.7	49.1
In progress	-	40.0	34.0	3.8	24.2
Completed	[8]*	40.0	22.0	7.5	26.7
Not required	-	-	-	-	-
Total % (N)	- (8)	100.0 (50)	100.0 (50)	100.0 (53)	100.0 (161)
<u>Data Collected for Thesis</u>					
Not started	-	32.0	56.2	90.6	57.2
In progress	[6]*	54.0	41.7	9.4	36.5
Completed	[2]*	14.0	2.1	-	6.3
Not required	-	-	-	-	-
Total % (N)	- (8)	100.0 (50)	100.0 (48)	100.0 (53)	100.0 (159)
<u>Draft of Thesis Written</u>					
Not started	[2]*	83.3	85.7	98.1	86.2
In progress	[5]*	11.9	14.3	1.9	11.7
Completed	[1]*	4.8	-	-	2.1
Not required	-	-	-	-	-
Total % (N)	- (8)	100.0 (42)	100.0 (42)	100.0 (53)	100.0 (145)
<u>Thesis Approved</u>					
Not started	[5]*	90.2	87.8	100.0	92.9
In progress	[1]*	9.7	12.2	-	7.1
Completed	-	-	-	-	-
Not required	-	-	-	-	-
Total % (N)	- (6)	100.0 (41)	100.0 (41)	100.0 (53)	100.0 (141)

*Too few cases to compute percentages.

Of the students receiving awards in 1968 and now in the second year of their fellowship tenure, the majority have made distinct progress toward the doctorate. Two-thirds have completed the language requirement and almost half have met residence and coursework requirements. At least half of the 1968 students are still completing necessary courses, then, and close to two-thirds still have the qualifying exams ahead of them. It can be noted, however, that more than 40 per cent of the 1968 group were already working on collecting data and getting topics approved for their dissertations, possibly due to ideas or sources of data they had from their employment before accepting the fellowships, usually in libraries or universities.

It was expected that the 1969 students would not yet have completed any requirements and thus it is a bit surprising to note that a quarter had met language requirements and a tenth had completed coursework or examination requirements in the half-year or so since receiving their awards. The students making this progress apparently were given credit for graduate work done before receiving the LIS fellowship. The majority of the students receiving awards in 1969, however, were characterized as being "in progress" toward completing the early stages of doctoral work--coursework, residence or language requirements--although a few were reported to be working on later phases of study, such as qualifying exams, collecting data, or getting a topic approved.

From an overall perspective, it seems that the doctoral students supported by LIS fellowships have made substantial progress in their studies. With respect to general qualifying exams, for instance, fully

two-thirds of fellows in their third year of study (i.e. 1967 students) and half of those in only their second year of study (1968 students) have passed this important milestone in doctoral work. In fact, LIS fellows show quicker rates of completion than NDEA fellows, a comparable group of doctoral students who received substantial support for studies in other fields. As shown in Table 18, only about a quarter of NDEA fellows had passed their general exams within two years of study while about half had reached that stage within three years. LIS fellows thus seem to have progressed in their doctoral work more quickly than NDEA-supported fellows and, in turn, much more quickly than the average graduate student.

TABLE 18

PROPORTION OF STUDENTS WITH NDEA FELLOWSHIPS WHO COMPLETED EACH DOCTORAL REQUIREMENT WITHIN THE SECOND OR THIRD YEAR OF DOCTORAL STUDY^a
(In Percentages)

Doctoral Requirement	1960-61 Recipients Completing Within:		1961-62 Recipients Completing Within:	
	2 yrs.	3 yrs. ^b	2 yrs.	3 yrs. ^b
All Coursework Requirements	18.4	57.5	21.0	59.2
Residence Requirements	18.5	53.5	24.3	52.9
Passed the General Qualifying Exams	23.8	50.2	20.5	54.2
Completed Language or Tool Requirements	31.9	54.5	40.0	59.9
Dissertation Topic Approved	22.0	42.0	27.3	48.8
Finished Collecting Data for Dissertation	3.5	16.6	4.3	21.8
Submitted Draft of Dissertation	1.1	11.9	1.5	15.0
Dissertation Approved	1.1	10.9	0.6	12.0
Base (N)	(1039)	(1039)	(1057)	(1057)

^aSource: Study of NDEA Fellowship Program--Phase II (BSSR, July, 1970), Table III-2.

^bCumulative total.

V. EMPLOYMENT CHANGES

Previous Employment of Fellowship Recipients

Before accepting the LIS fellowship, the great majority of students in each program had been working, i.e. 83 per cent of the students in master's programs, 90 per cent of the students in post-master's programs, and 98 per cent of the students in the doctoral programs. Among those who had employment experience (see Table 19), a rather narrow range of positions appear although varying according to the type of LIS program the students entered. As many as 40 per cent of the master's students reported they had done library work (although very few master's students held graduate degrees or had undergraduate library science majors); half of these students had been employed in university libraries, and a quarter had worked in public libraries. Overall, about a quarter of the master's students had been in academic employment, primarily teaching in high school, and just over 30 per cent had worked in all other fields, mostly in industry.

As expected, the post-master's students had typically been librarians before accepting their fellowships, although only a small percentage had combined administrative or teaching duties with their librarian work.⁶ Their positions had been mainly in university libraries and secondarily in high school or public libraries. Only about a tenth of the post-master's students had been teaching, mostly at the college level. Another tenth held other types of positions, primarily in government or industry.

⁶Only 0.9 per cent of master's students, 4.2 per cent of post-master's students, and 2.1 per cent of doctoral students had held library positions combined with other duties.

TABLE 19
 PRE-PROGRAM EMPLOYMENT OF TITLE 11-B FELLOWS
 BY TYPE OF AWARD^a
 (In Percentages)

Type of Employment	Students			Total
	Master's	Post-Master's	Doctoral	
<u>Academic Positions</u> (Teaching or Administrative)	27.0	12.6	16.2	23.8
Universities	5.0	9.5	14.5	7.2
High schools	22.0	3.1	1.7	16.6
<u>Librarian Positions</u>	41.3	75.8	78.2	51.1
University libraries	20.5	36.9	50.9	27.6
High school libraries	7.9	20.0	8.1	8.9
Public libraries	10.5	12.6	14.5	11.5
Other libraries	2.4	6.3	4.7	3.1
<u>Other Positions</u>	31.6	11.6	5.6	25.1
Universities	7.1	2.1	1.3	5.6
Government	6.5	3.2	1.3	5.2
Industry	14.8	5.3	1.3	11.5
Miscellaneous	3.2	1.0	1.7	2.8
Total % (N)	100.0 (891)	100.0 (95)	100.0 (234)	100.0 (1220)

^aExcludes persons in school or not working.

Most of the students receiving doctoral fellowships had already been involved in library work also, usually in university libraries and less often in public libraries. Doctoral students not in library work held academic positions in colleges and universities for the most part, and very few (5.6%) held positions that were neither library work nor academic.

On the whole, then, many of the students receiving LIS awards had some previous exposure to library employment. This was particularly true of the post-master's and doctoral students, most of whom already held a graduate degree and thus might also have held relatively responsible positions.

Post-Program Employment

At the time of the study, close to half of all Title II-B fellows were still in school and thus had not yet returned to employment positions. Most of the doctorates were still in school (78.5%), as were about a quarter of post-master's students and 38.6 per cent of the master's students. Looking only to the data on those who had returned to work after their studies (Table 20), considerable changes can be seen. Most notably, the proportion of persons in library employment has jumped, rising to 86.6 per cent of those now working.

The greatest change occurred with the master's students, among whom the proportion in library work had more than doubled, now accounting for almost all of their employment (91.7%). Accompanying this shift were major declines in the proportions in industry or in high school teaching.

TABLE 20

POST-PROGRAM EMPLOYMENT OF TITLE II-B FELLOWS
BY TYPE OF AWARD^a
(In Percentages)

Type of Employment	Students			Total
	Master's	Post-Master's	Doctoral	
<u>Academic Positions</u> (Teaching or Administrative)	2.7	23.9	49.0	7.9
Universities	1.6	23.9	49.0	7.0
High schools	1.1	-	-	0.9
<u>Librarian Positions</u>	91.7	70.5	47.0	86.6
University libraries	41.2	45.1	35.2	41.2
High school libraries	17.0	11.3	7.8	15.8
Public libraries	25.7	11.3	2.0	22.7
Other libraries	7.8	2.8	2.0	6.9
<u>Other Positions</u>	5.6	5.6	4.0	5.5
Universities	1.4	4.2	2.0	1.7
Government	1.8	1.4	-	1.6
Industry	1.9	-	2.0	1.7
Miscellaneous	0.5	-	-	0.5
Total % (N)	100.0 (626)	100.0 (71)	100.0 (51)	100.0 (748)

^aExcludes persons in school or not working.

Among the post-master's students, about the same proportion of students went into library work as had been in that work before, although there was some overall shift in the type of library involved. Fewer persons were working in high school or public libraries, and more persons were employed in university libraries. Also, more of the post-master's students were employed by colleges and universities either as teachers or administrators than before the program.

The doctoral students who have returned to work recorded a great deal of employment change, mainly out of librarian positions (primarily in universities, it will be recalled) and into teaching or administrative positions with universities and colleges. It is quite likely that these positions are related to library work, although our data do not specify the nature of these positions any further. Their choice of employer--universities--has changed little, even though considerably fewer of the doctoral students could still be considered "librarians."

Tables 21 to 23 present our data on employment changes in a more detailed manner, organized so that turn-over patterns, rather than simply the aggregate results of those changes, can be seen. For the most part, employment shifts concerning library work are given the greatest emphasis, partly because of interest in the subject but also because most of the post-program employment was concentrated in the library field, thus usually leaving insufficient cases for analysis in other employment fields.

Employment Changes for Master's Students

The data on individual employment shifts reinforce our earlier comments on the extensive changes made by students in the master's program.

TABLE 21

PRE- TO POST-PROGRAM EMPLOYMENT CHANGES AMONG TITLE 11-B
FELLOWS, GROUPED ACCORDING TO FORMER POSITIONS^a

Type of Position	Students						Total	
	Master's		Post-Master's		Doctoral		N	%
	N	%	N	%	N	%		
<u>Those Formerly in Library Positions are now in:</u>								
Library positions	184	92.9	36	70.6	23	59.0	243	84.4
Academic positions	4	2.0	13	25.5	14	35.9	31	10.8
Other positions	10	5.1	2	3.9	2	5.1	14	4.9
Total	198	100.0	51	100.0	39	100.0	288	100.0
<u>Those Formerly in Academic Positions are Now in:</u>								
Library positions	108	86.4	5	-*	-	-*	113	79.0
Academic positions	9	7.2	2	-	11	-	22	15.4
Other positions	8	6.4	-	-	-	-	8	5.6
Total	125	100.0	7	-	11	-	143	100.0
<u>Those Formerly in Other Positions are Now in:</u>								
Library positions	131	92.2	4	-*	-	-	135	91.2
Academic positions	2	1.4	2	-	-	-	4	2.7
Other positions	9	6.3	-	-	-	-	9	6.1
Total	142	100.0	6	-	0	-	148	100.0
<u>Those Formerly in School or Not Working are Now in:</u>								
Library positions	95	94.1	2	-*	-	-	97	93.3
Academic positions	1	1.0	-	-	-	-	1	1.0
Other positions	5	4.9	1	-	-	-	6	5.8
Total	101	100.0	3	-	0	-	104	100.0

^aExcludes those still in school or not yet working after the program.

*Too few cases to compute percentages.

As many as 334 master's students without previous library experience entered library work after completing their studies (see Table 21). Most of these new librarians had been in "other" fields before, primarily in industry or government; a good number had been in teaching, mainly in high schools, while the rest had not worked before or had been in school (see frequencies in Table 21). Table 22 shows the type of library chosen by these "new" librarians.⁷ Almost half of those for whom we have this information (N=108) chose university libraries, while about a third (N=67) took positions with public libraries.

In contrast, there was only a slight degree of attrition among those who had been in library positions before their graduate studies (see Table 21). Almost all for whom we have data on post-program employment were again working in libraries; the only exceptions were 2.0 per cent who took academic positions instead, and 5.1 per cent who took jobs in "other" fields.

Of the master's students formerly in library work who had stayed in that field, just over half also returned to the same type of library as their previous employment (see frequencies in Table 22). Stability of employer occurred most often among those with experience in university libraries or public libraries, a bit less often among those in high school or other libraries. Of those who did change to a different type of library, just over a third found their new positions in university libraries, and just under a third went into public libraries. High school or other libraries were sources of new employment less often.

⁷Such data was given for 235 of the 334 master's students entering library work for the first time.

Overall, university libraries appear to be a popular choice among these graduates of Title II-B master's programs. Among those with prior library experience, for instance, stability was greatest for university libraries and the most frequent type of change was into university libraries. In addition, a college or university employer was the most frequent choice of the new librarians for whom we have such detailed information. Using these same criteria, it seems that public libraries rank second in popularity as an employer, while students chose to take positions with high school or other libraries much less often.

From the point of view of later employers (Table 22), positions in university libraries were held mainly by people with previous university library experience (29.7%) and next by former high school teachers (19.3%). The record for public libraries is quite similar, since a quarter of new employees had worked in public libraries before, and 17.5 per cent had previously been in high school teaching. Among those master's students now working in high school libraries, only 21.8 per cent had worked there before; the large majority of the recruits were people with previous experience in high school teaching, who thus already had acquired some experience with people of that age group in a learning context.

Noteworthy, too, is a certain amount of interchange within universities between library positions and other positions, either in administration or teaching. About half of the master's-level students with previous university employment outside of libraries are now working in university libraries. At the same time, 17.4 per cent of the master's-level students entering general university employment after completing their studies had been in university libraries previously.

TABLE 22

TYPE OF POST-PROGRAM EMPLOYER OF TITLE II-B MASTER'S STUDENTS,
BY TYPE OF PRE-PROGRAM EMPLOYER

Type of Former Employer	Total N	Post-Program Employment in Libraries						Other Post-Program Employment								
		University Libraries		High School Libraries		Public Libraries		Other Libraries		Universities		High Schools		Miscellaneous		
		(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	
<u>Formerly with Libraries</u>																
University libraries	95	57	29.7	6	7.7	18	15.0	5	22.7	4	17.4	2	2.1*	3	14.3	
High school libraries	39	12	6.3	17	21.8	3	2.5	2	9.1	2	8.7	2	5.1	1	4.8	
Public libraries	55	14	7.3	7	9.0	30	25.0	2	9.1	1	4.3	-	-	1	4.8	
Other libraries	5	1	0.5	-	-	2	1.7	1	4.5	1	4.3	-	-	-	-	
<u>Formerly in Non-library Employment</u>																
Universities	58	26	13.5	2	2.6	17	14.2	1	4.5	9	39.1	-	-	3	14.3	
High schools	107	37	19.3	36	46.2	21	17.5	3	13.6	2	8.7	5	4.7	3	14.3	
Industry	71	28	14.6	9	11.5	20	16.7	5	22.7	2	8.7	1	1.1	6	28.6	
Other	36	17	8.8	1	1.3	9	7.5	3	13.6	2	8.7	-	-	4	19.0	
Total	466	192	100.0	78	100.0	120	100.0	22	100.0	23	100.0	10	100.0	21	100.0	

*Refers only to those who had post-program employment and for whom details on employer were given.

**Too few cases to compute percentages.

Employment Changes Among Post-Master's and Doctoral Students

The employment record for post-master's and doctoral students also shows a great deal of stability, both in terms of type of position and place of employment (see Table 21). Most of the post-master's students who were librarians before the program were again in library work (70.6%). Further, the majority of the former librarians had not only returned to the same type of position, but also to the same type of library (see Table 23).

In addition, another 10 persons began library work for the first time after completing their post-master's program, mainly recruited from teaching or administrative positions in high schools (N=4) or colleges (N=4) (see Table 23). On the other hand, a quarter of the former librarians in the post-master's program took academic positions (teaching or administration) after completing their studies (Table 21). These positions may have been related to library work.

Stability of position is also common among the small number of doctoral students who had returned to work by the time of the study. All of those previously in academic positions returned to such positions and most of those who had been in library work before were again working as librarians (see Table 21). More than a third of former librarians did take academic positions although probably related to their library experience. Some evidence of the professional commitment of doctoral students previously in library work is found in the fact that almost all of those presently in library work were employed in the same type of library as their pre-program employment (Table 23).⁸

⁸ As another evidence of professional advancement, we had inquired about the number of articles and/or books published by each Title II-B fellow. We received responses on these questions for less than 10 per cent of the fellows, however, limiting the usefulness of the probe. Of the 149 respondents for whom we have answers, 35 had one or more articles published (23 with one article only), 10 had a book published, usually one.

TABLE 23

TYPE OF POST-PROGRAM EMPLOYER FOR POST-MASTER'S AND DOCTORAL STUDENTS,
BY TYPE OF PRE-PROGRAM EMPLOYER^a
(Frequencies)

Type of Former Employer	Total	Post-Program Employment in Libraries				Other Post-Program Employment			
		University Libraries	High School Libraries	Public Libraries	Other Libraries	Universities	High Schools	Miscellaneous	
<u>Post-Master's Students</u>									
University libraries	23	16	-	1	1	5	-	-	-
High school libraries	14	3	6	-	-	5	-	-	-
Public libraries	8	1	-	4	-	3	-	-	-
Other libraries	3	1	-	-	1	1	-	-	-
Other university employment	9	2	-	2	-	5	-	-	-
Other high school employment	4	2	2	-	-	-	-	-	-
Industry	2	1	-	-	-	1	-	-	-
Miscellaneous	1	1	-	-	-	-	-	-	-
Total (N)	64	27	8	7	2	20	-	-	-
<u>Doctoral Students</u>									
University libraries	25	13	-	-	1	10	-	-	1
High school libraries	9	2	3	-	-	4	-	-	-
Public libraries	4	1	-	1	-	2	-	-	-
Other libraries	-	-	-	-	-	-	-	-	-
Other university employment	11	-	-	-	-	11	-	-	-
Other high school employment	1	-	-	-	-	-	1	-	-
Total (N)	50	16	3	1	1	27	1	1	1

^a Refers only to those who had post-program employment and for whom details on employer were given.

In conclusion, it would appear that while doctoral and post-master's programs contribute to advanced training of personnel already in LIS fields, the master's programs recruit new personnel. Further, it appears that graduates of the doctoral program, who are generally recruited from universities and colleges, return to academic employers, perhaps to administrative positions. Graduates of post-master's programs, who are more often recruited from high school or university libraries, find employment either as librarians or, secondly, as teachers in a university or college. The students in master's programs, who constitute the only group which is to any great extent recruited from fields unrelated to LIS, find employment predominantly as librarians after they complete their program, first in universities and secondly in public libraries.

The heavy concentration of university employment, either in library work or teaching and other university activities raises some questions about the effectiveness of the Title II-B programs in increasing the supply of competent and well-trained librarians into systems where the need is especially great: secondary schools and public libraries. Of course, increasing the manpower resources for library work in universities and colleges was one of the explicit program goals. Furthermore, it is also not surprising that persons with advanced degrees and training seek and find employment in universities. Recent studies have shown that prestige, congenial colleagues, more comfortable working conditions, and probably higher pay scales all contribute to the attraction of university employment, not only for those trained in library science but for those in other fields as well. Policy-makers must decide,

however, whether future programs should more sharply emphasize to the participating schools of library and information sciences the desirability of placing later graduates in positions outside the university, since sizable proportions of earlier graduates have been recruited by academic institutions.

VI CONCLUSION

The results of the present study would strongly suggest that the Title II-B program is successful in its objective of training individuals in the principles and practices of the library and information sciences. This conclusion is based on an objective evaluation of the program in terms of degree completion rates and post-program employment of Title II-B fellows, and in subjective evaluation of the program by the deans of participating institutions.

The results of the student data would suggest that a majority of Title II-B fellows successfully complete their program and are immediately employed either as LIS faculty in graduate schools or find positions in libraries and information centers. The greatest beneficiaries of the new and better-trained cohorts of librarians were mainly the universities. Public and high school libraries benefitted, too, but to a more modest extent.

All three programs (master's, post-master's, and doctoral) contribute equally well to the fulfillment of the objectives of the program, although there is evidence to suggest that while post-master's and doctoral programs help advance the training of personnel already in LIS fields, it is the master's program through which new personnel are recruited, particularly into positions of library work in areas outside the university. Since one of the indirect purposes of the Title II-B program is to recruit or attract talent from fresh sources, it would be advisable to increase the number of fellowships for master's programs.

The deans' requests for additional fellowships also indicate a preference for the master's program. However, this is not to say that other programs should be discouraged; on the contrary, the deans very clearly indicate that an increase in any or all three of the programs would be highly desirable. The general feeling is that the Title II-B program has allowed the LIS schools to compete for higher-calibre students, both with other departments and for out-of-state students. Although the deans make the point that the delay in the Office of Education's confirmation of the number of fellowships allotted to each school each year decreases the deans' effectiveness in competitive recruiting, the general feeling is still that, due to the higher quality of students recruited, the program has had the direct effect of improving the degree completion rates and shortening the duration of degree completion. The results obtained from student data would indicate that the degree completion rates of Title II-B fellows are exceptionally high and that a majority complete their degrees within the tenure of their fellowship. The results also indicate that a majority of program graduates find employment as librarians or as faculty in LIS institutions. In addition to the training of well-qualified librarians or LIS faculty, many deans strongly feel that the institutional support has strengthened the program of instruction and has definitely improved the quality of library education. There can be little doubt that the programs served the universities and the profession extremely well; this is probably an essential first step if future tasks--concerning more extensive and better service by the profession to a wider clientele--are to be accomplished.

Finally, many deans see the Title II-B program as having the indirect benefit of greatly improving the status of library education and librarianship in the view of people outside the library profession.

As one dean states:

The existence of these fine fellowships, finer in some respects than those existing in almost every other field, has given library schools visibility on their own campuses which they had not enjoyed previously, and has given the students holding these fellowships a new status among other graduate students. The fact that library education was given this kind of recognition by the Congress in the Higher Education Act has done more for librarianship in the eyes of non-librarians than nearly any other event in recent library history.⁹

⁹See Appendix B for a selection of comments made by the deans.

Appendix A

BUREAU OF SOCIAL SCIENCE RESEARCH, INC.
1200 Seventeenth Street, N. W.
Washington, D. C. 20036

LIBRARY FELLOWSHIP STUDY ADMINISTRATIVE INFORMATION QUESTIONNAIRE

This questionnaire should be completed by the Dean or his representative involved in the final awarding of Higher Education Act, Title II-B Fellowships. In this questionnaire we are primarily interested in determining (a) the size of the Library Science enrollment beginning with the academic year 1966-67 when the HEA Title II-B program was initiated, (b) number of HEA Title II-B Fellowships and other grants awarded, and (c) selection criteria used in awarding these grants. Thank you for your cooperation.

Name of the person completing this questionnaire:

Title: _____

University: _____

Telephone: _____

1. Please check appropriate box to indicate academic schedule followed by your department or school:

Semester

Trimester

Quarter

Other (Specify): _____

2. In the following questions our major interest is to determine the total number of full-time Library Science students and HEA Title II-B Fellowship enrollment. Please note that newly-entering means all graduate students enrolling in your Library Science department or school for the first time, including those who transferred from other departments or institutions.

	1966-67	1967-68	1968-69	1969-70
A. TOTAL LIBRARY SCIENCE ENROLLMENT				
1. Number of <u>formal</u> applications received				
2. Number of students accepted				
3. Number of <u>newly-entering</u> students enrolled				
4. Newly-entering students requesting financial aid				
5. Total enrollment, i.e. newly-entering and continuing students				
B. HEA TITLE II-B FELLOWSHIP ENROLLMENT				
1. Number of newly-entering students considered for HEA Title II-B Fellowships each year				
2. Number of HEA Title II-B Fellowships offered to newly-entering students each year				
3. Number of students who rejected HEA Title II-B Fellowships				
4. Number of HEA Title II-B Fellows who later resigned from the program				

3. What was the total number of HEA Title II-B Fellows who were enrolled for the full academic year? Please indicate totals for the three programs listed below, differentiating between (a) newly-entering and (b) continuing students:

PROGRAM	1966-67			1967-68			1968-69			1969-70		
	a	b	T	a	b	T	a	b	T	a	b	T
Masters												
Post-Masters												
Doctoral												

4. What was the total number of students who terminated their studies during each year? Please differentiate between (a) students who had completed their program and (b) students who terminated their studies for other reasons:

TYPE OF STUDENTS	1966-67			1967-68			1968-69			1969-70		
	a	b	T	a	b	T	a	b	T	a	b	T
Title II-B Fellows												
Other												

5. If more HEA Title II-B Fellowships were available, would you have accommodated any additional students without lowering the quality of students accepted? If yes, please give an estimate of additional fellowships that could have been given each year for each program (masters, post-masters and doctoral). If no, please explain.

Yes

	1966-67	1967-68	1968-69	1969-70
Masters				
Post-Masters				
Doctoral				

No

6. If your department or school has sources of financial support other than HEA Title II-B Fellowship program, would you please briefly describe the types and amount of aid provided by these programs? Please limit this information to financial aid in the amount of \$1,000 or more.

7. Would you please indicate the total number of students offered financial aid other than HEA Title II-B Fellowships for the academic years of:

1966-67 _____

1968-69 _____

1967-68 _____

1969-70 _____

8. We are interested in determining the selection criteria used in awarding HEA Title II-B Fellowships and other grants, since schools vary a great deal in the relative weights they attribute to personal recommendations, undergraduate grades, the type of undergraduate school attended, GRE scores, etc. Would you please explain in detail what factors are considered in awarding (a) HEA Title II-B Fellowships and (b) other grants.

Is there a difference in factors considered important in awarding HEA Title II-B Fellowships and other grants? If yes, please explain.

9. What do you think is the impact or the contribution of the HEA Title II-B program in relation to:

	<u>Very Great</u>	<u>Some</u>	<u>Very Small or None</u>
a. Increasing the number of students enrolled in Library Science Programs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Improving the quality of students enrolled in Library Science Programs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Faster program and degree completion rates.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Other (Specify) _____ _____ . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A-7

ADDITIONAL COMMENTS

THANK YOU

11. Please list below in chronological order the collegiate and graduate institutions the Fellow has attended, beginning with the school from which he received his undergraduate degree. Give dates of attendance, major field, degrees received and the dates of degrees. Be sure to include your own institution.

INSTITUTION		ATTENDANCE		MAJOR FIELD OF STUDY	DEGREES RECEIVED	
NAME	STATE	FROM MO. YR.	TO MO. YR.		TYPE	DATE MO. YR.
		/	/			/
		/	/			/
		/	/			/
		/	/			/
		/	/			/

12. Please check one letter grade to indicate the Fellow's undergraduate grade letter average.

A+ A A- B+ B B- C Not available

13. If the Fellow has taken the Graduate Record Aptitude Examination, what were his verbal and quantitative scores?

Verbal score _____

Not available

Quantitative score _____

(QUESTION 14 APPLIES ONLY TO DOCTORAL CANDATES)

14. If the Fellow is currently in school, please check appropriate columns to indicate his present status:

	<u>Not Required</u>	<u>Not Started</u>	<u>In Progress</u>	<u>Completed</u>	<u>If Completed Month/Year</u>
All coursework requirements. . .	<input type="checkbox"/> 3	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<u> / </u>
All residence requirements . . .	<input type="checkbox"/> 3	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<u> / </u>
Passed the general qualifying exams.	<input type="checkbox"/> 3	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<u> / </u>
Completed language or tool requirements	<input type="checkbox"/> 3	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<u> / </u>
Dissertation topic approved. . .	<input type="checkbox"/> 3	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<u> / </u>
Finished collecting data for dissertation	<input type="checkbox"/> 3	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<u> / </u>
Submitted draft of dissertation	<input type="checkbox"/> 3	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<u> / </u>
Dissertation approved.	<input type="checkbox"/> 3	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<u> / </u>

15. What was the Fellow's employment(s) in the last three years prior to participation in the program? Please indicate type(s) of work and place(s) of employment.

16. What is the Fellow's post-program employment? Please indicate type of work and place of employment.

17. Please list any articles or books published by the Fellow after participating in your program.

THANK YOU



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

AVLP/DLP/LISB

November 3, 1969

Dear Dean,

The Higher Education Act of 1965, Title II-B has provided the authority to award fellowships to institutions of higher education for training in librarianship and information science during the past four years. To adequately evaluate the program, it is necessary for us to have certain basic data. The Bureau of Social Science Research has been given the task to collect and analyze selected information relating to the fellowship program which may provide some insight to the procedures used by institutions in awarding fellowships, the pool of applications from which the awards are made and the program effects on early careers. This study is an exploratory one, and hopefully will provide some indicators for additional investigation.

I am sorry to burden you and your staff with another questionnaire, but this is the only way we have to collect the information. This is important and significant data which is needed to assist us in making the fellowship program more effective and meaningful. I will be grateful for your cooperation in providing this information at an early date. Thank you.

Sincerely yours,

Paul C. Janaske

Paul C. Janaske, Chief
Library and Information Science Branch

BUREAU OF SOCIAL SCIENCE RESEARCH, INC.

1200 SEVENTEENTH STREET, N.W., WASHINGTON, D. C. 20036

TELEPHONE (202) 223-4300

November 3, 1969

Dear :

We would greatly appreciate your participation in our study of the Library Science Fellowship program sponsored by the U. S. Office of Education, under Higher Education Act, Title II.

You will find in the enclosed BSSR kit the Administrative Information Questionnaire and a number of Student Information Questionnaires to be completed by your office, and a return postcard to indicate receipt of the kit. Please return the postcard at your earliest convenience.

Both Administrative and Student Information Questionnaires were assembled after consulting several Deans of Schools of Library Science regarding the availability of the requested information and staff-time needed for completion. The Administrative Information Questionnaire requires information regarding the Library Science applicants, size of the HEA Title-II Fellowship group, criteria used in awarding Library Science grants and fellowships, and an evaluation of the HEA Title-II program. This questionnaire should be completed by you or your representative involved in the final awarding of the HEA Title-II Fellowships.

The Student Information questionnaires seek background and academic information on EACH student supported by the HEA Title-II Fellowship program from the beginning of the program in 1966-67 academic year to present. We realize that this is a more burdensome request, and that some of the information may not be readily available in your files, but we would appreciate it very much if you could supply us with as much information as possible. If you need any additional Student Information Questionnaires, please indicate so on the return postcard.

We are enclosing a self-addressed and stamped return envelope for your use. If your institution uses a separate form for HEA Title-II Fellowship applications, please include a copy with your completed questionnaires.

Please feel free to contact me if you have any questions or comments regarding the study. Thank you very much for your cooperation.

Sincerely,

Engin I. Holmstrom, Ph.D.
Project Associate

EIH:jmm
Enclosures

APPENDIX B

SOME QUOTATIONS REPRESENTATIVE OF COMMENTS OFFERED BY A NUMBER OF DEANS REGARDING THE IMPACT OF TITLE II-B PROGRAM

The HEA Title II-B program has probably been one of the greatest factors in promoting library education since the Williamson Report. Not only has its related publicity had an impact on recruitment, but it has made continuing education for library service a possibility for many who could not have afforded advanced study. It has served as an excellent pump-primer for additional funds to be created locally in support of library education.

The grant funds available to us under HEA Title II-B have had a very favorable and cogent impact upon our program, student personnel, and library school resources.

For example, the impetus for developing the interdisciplinary program came from this legislation. Although many components of the program existed previously, it would have been pointless to implement it without the means to attract and support a group of outstanding students. As a result of the fellowships available, we now have the maximum number of Ph. D. students who can be accommodated.

For the first time, we have been able to compete, favorably, with fellowship programs in other disciplines and professions. As a result, the number of high quality applicants to our program increased perceptibly and there was no attrition among the recipients for 1966-67 and 1967-68, and only one resignation in 1968-69, due to ill health.

Another favorable feature of the fellowship program is the provision for travel, dependents, and the exemption from fees which are quite sizable for non-resident students. These provisions make it possible for persons with family responsibilities or those living a great distance from the university of their choice to continue their educations. In 1966-67 two outstanding students from San Juan, Puerto Rico accepted M. L. S. degree fellowships here and both are now employed in the University of Puerto Rico Library where the staff needs are critical.

The impact of the funds has also been felt in the matter of resources for teaching. While the addition of new programs and students is a drain upon our resources, the institutional support funds have made it possible to increase the faculty, the clerical staff, and the collection of research materials. These benefits have accrued to all students in the Graduate Library School, as well as the fellows.

We have found that the two best ways to recruit for the profession are:

1. to raise standards and attract the best students, and
2. to offer scholarship aid competitive with other disciplines.

We have been making available twelve assistantships per year. It takes the student two years to complete the degree, under this program. We are restructuring our assistantship program to allow a first semester scholarship, followed by a spring, summer, fall assistantship program--allowing the student to complete his degree in a year and a half with full coverage of expenses and some additional cash.

The assistantship program is especially helpful to the student from disadvantaged areas and ones with a poor academic preparation for librarianship, as it gives them experience along with their courses, reinforcing the classroom learning. It does not have the onus of "tutoring" and can be a two-way benefit to students and department. Students carry a lighter program and stretch their work over 1 1/2 academic years, and one summer. In some cases two years should be allowed for the work-study program.

In addition to outright scholarships, I would like to propose consideration of an assistantship program which would benefit both the student and the institution. Straight scholarships should be reserved for the academically talented. A program of assistantships allowing a flexibility of from one and a half to two years for the completion of the degree and requiring about ten hours of work per week would be valuable.

I recommend, therefore, a dual program of federal assistance:

1. outright scholarships with an increase in the student's stipend (Some people who wish to enter the profession and have family responsibilities or a home to pay for cannot manage on the present stipend), and
2. an assistantship/scholarship program of 1 1/2 to 2 years to be used particularly in recruiting from disadvantaged areas.

Regarding the fellowship program itself, we would suggest that an attempt be made to build more flexibility into the allocation and distribution of funds. Perhaps a dual support structure could be established, with some monies rendering "total" support, as well as other monies being made available only for remission of tuition and fees for students not requiring the extended support. In this way, the imbalance now apparent between those requesting financial aid and those finally receiving such aid might be partially redressed.

The need for qualified special librarians, information specialists, information scientists, school librarians and other librarians is especially great in this country. Encouragement by support through the HEA Title II-B program should assist in meeting this need.

The HEA fellowships at the M.A. level have made an outstanding contribution in the years they have been available. They have made possible the recruitment of some outstanding students who in future years will make a worthwhile and above average contribution to librarianship. The Institutional support funds have been of great help especially to the new programs in graduate library science.

While the M. S. level fellowships have been, in my opinion, very helpful in attracting good students to the profession, I doubt if you will be able to discern a measurable increase in enrollment. With the doctoral and sixth-year fellowships, the situation is clearer. There has been a decided impact on doctoral programs and many people who would never have entered such programs have been able to do so. Only time will tell how wisely invested the money was. My personal opinion is that priority should go to doctoral programs but that the schools that receive them should be required to measure up to high standards in faculty ratio, research productivity, etc. I am sure that, had such precautions been taken from the beginning, some schools that are seriously over-extended now would have developed doctoral programs at a more realistic rate.