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AUTHOR Smith, Dana E.
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ABSTRACT

In order to ascertain what data elements should commonly be considered in the development of a meaningful procedure for recording and analyzing library reference transaction data for planning purposes, a comparison was made between the development, use, and results of surveys designed and tested at the University of Nebraska at Omaha (UNO) and the University of Illinois at Urbana-Champaign (UIUC). It was concluded that although the computer-assisted approach utilized at UNO allows for greater efficiency in data analysis, the UIUC manual approach can provide similar results at considerably less cost in libraries without access to data processing equipment. In addition, the UIUC survey form was found to be easy to modify in order to accommodate analysis of reference activity in general or specific aspects of subjects depending on the need and the environment where the survey is conducted. A comparative overview of the two survey methods is presented in this report. Appendices comprise the UIUC survey form and three worksheets for UIUC data analysis. (Author/ESR)

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TESTING COMMON DATA ELEMENTS FOR REFERENCE PLANNING PURPOSES: A COMPARISON OF SURVEYS

Submitted by:
Dana E. Smith
Undergraduate Librarian*
Purdue Undergraduate Library
Purdue University Libraries
West Lafayette, Indiana 47907

* Formerly Social Sciences Reference Librarian, University of Nebraska at Omaha, University Library and Assistant Undergraduate Librarian, University of Illinois at Urbana-Champaign, Libraries.

IR 050 241

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INTRODUCTION

Since there are currently no standards to adequately measure and evaluate reference service effectiveness, each library must act independently when designing a descriptive reference statistics procedure. Although the research on this subject indicates libraries are commonly interested in the accumulation of reference statistics to facilitate planning and improve upon the delivery of reference services, the absence of standards has produced inconsistencies in the particular methodologies employed for this purpose. There are continuing efforts to overcome this problem through the establishment of a standardized format for the collection and reporting of descriptive reference statistics. However, agreement on the overall design, content and method of implementation of these standards has not been reached.[1] Consequently, until comprehensive, mutually acceptable standards to measure reference service are commonly applied, it is likely that evaluative studies in this area will continue to be exploratory, inconsistent, and indeterminate.[2]

This situation has placed some limitations on the proliferation of concerted studies in this area. However, interest in designing studies to investigate and improve upon various aspects of reference service within individual libraries has continued. Although the purpose and, subsequently, the methodologies of these studies may vary from library to library, of the known studies, there is evidence that a pattern is developing regarding certain data elements which appear to be commonly surveyed and are generally considered important when implementing a reference statistical procedure to facilitate planning.[3]

This paper concentrates on the feasibility and reliability of uniformly testing commonly surveyed data elements at different libraries within the context of a reference statistics procedure designed to assist planning. The underlying assumption is, if these common data elements were to be incorporated

into a standard survey form and similarly tested in more than one library, perhaps consistent, more meaningful information could be obtained to exact a better understanding of the reference process. This information could provide a basis for overall planning of library service activities, and might also assist in the development of standard measurements from which uniform reference statistical data could be collected and evaluated.

In order to assess the feasibility of this concept, similar reference statistics procedures were designed and tested at the University of Nebraska at Omaha, University Library (UNO) and the University of Illinois at Urbana-Champaign, Undergraduate Library and Main Library Reference Department (UIUC). In the comparison of these surveys, the procedural advantages and disadvantages to the final design utilized at each institution will be assessed through the discussion of the development, use and results of each study.

BACKGROUND-UNO STUDY

The usefulness of recording reference statistics has been argued from various extremes. On the one hand, many librarians would agree that statistics are useful for planning purposes, however, others have observed that the collection of statistics contributes little to the functioning of the library program and may, in fact, prove detrimental by deflecting the library's finite personnel resources in the performance of profitless tasks. 4 The compromise on this issue should rest somewhere in the ability to collect as much meaningful information as possible, without presenting undue constraints on those collecting and analyzing the recorded data. In the development of the UNO and UIUC surveys, an attempt has been made to negotiate this compromise.

The primary reason for the development of the UNO survey was to redirect the extensive reference personnel time in collecting and analyzing reference transaction information of limited value. At that time, the process of producing

reports on collected data alone took nearly 400 hours of staff time each year. Based on an average of 12 transactions per hour, this conceivably resulted in the loss of potential service to 4,800 patrons annually. Recognizing this deficiency, remedial alternatives were explored through investigation of other methods to collect more meaningful information, but with greater efficiency.

DESIGN-UNO STUDY

The available research on reference statistics provided much useful information regarding collection procedures and types of data to include in the design of a more appropriate procedure. After a review of the studies in this area, the decision to include certain data elements in the UNO and, ultimately, the UIUC survey was derived from the results of the 1977 survey of reference/information statistics forms and procedures conducted by the ALA Committee on Statistics for Reference Services. 5 This survey revealed, of those libraries utilizing statistical forms for collecting reference data, there was some evidence of a consensus on those data elements most commonly surveyed for evaluative, planning purposes. Those areas found most often surveyed were: day of the week, time of day, year and month, type of reference transaction, form of request, type of material used to answer questions, duration of transaction, subject area, and status of the answerer. These areas depicted the most comprehensive, commonly analyzed aspects of reference service found from one library to another. Therefore, it was decided to test the usefulness of these common data elements in a reference statistics procedure designed to facilitate planning of overall reference department activity.

Although these data elements represented the optimum coverage of what could be surveyed, it was apparent the manual processing of information this extensive would still impose a great burden on personnel collecting and analyzing this data. Consequently, alternatives in the method of collection and analysis

of the recorded data were explored. For this purpose, substantial information regarding various procedures for reference data collection and manipulation was obtained from information provided at the 1977 ALA Pre-Conference on Reference Statistics for Reference Services. The Pre-Conference was intended to provide guidance on sampling and other statistical methods that could identify areas susceptible to improvement without imposing a heavy burden of observations.[6] The work sessions were designed to instruct participants in various sampling techniques, as well as introducing methods for analyzing collected data including use of the Statistical Package for the Social Sciences Program (SPSS). Although sampling and the use of computer programs to analyze data made recording and manipulation of collected data more efficient, there was no discussion of a means to eliminate the mandatory key-punching of information from completed survey forms to a compatible machine-readable format. If this task could be eliminated using a machine-readable encoding device, data could be immediately and efficiently processed through a supporting computer program. Except for the use of a direct input terminal at the reference desk, which, altough not totally unimaginable, was impractical, data collection on machine-readable optical mark scan sheets provided the only workable alternative for the overall purpose of the UNO study.

In order to determine if this approach was financially feasible and compatible with local data processing capabilities, information regarding cost estimates for developing this procedure and sources of available support was solicited from the UNO Office of Computer Operations. Their estimated cost for developing this procedure including programmers and project analyst's time, the creation of a plate to print 10,000 scan sheets and operation of a supporting computer program was $5,700 over two years. As indicated earlier, the amount of time spent processing reference transaction information with the existing manual approach

was 400 hours annually. This represented approximately $3,200 in personnel expenditure and resulted in the potential loss of service to an average of 4,800 patrons per year. Since the proposed automated procedure proved cost effective and the expected service and administrative benefits were significant, the support for the project was successfully obtained through a grant partially funded by the Information Systems Executive Council of the University of Nebraska System with matching funds supplied by the UNO University Library.

DATA ANALYSIS-UNO STUDY

The practicality of utilizing optical mark scan sheets to record reference transaction information provided an efficient approach to realize one major objective of the UNO study. Collection of data in this manner provided a means to survey extensive data concerning reference activity while substantially reducing the need for time consuming analysis of reference transaction information. To expedite this, a computer program was developed to read and process information from scan sheets designed to reflect data on reference transaction activity in the following areas: day of the week, time of day, year and month, type of reference transaction, type of material used to answer question, form of request, duration of transaction, subject area, and status of the answerer.

Since the data collected from these areas was to assist with planning, the computer was programmed to produce monthly and year-to-date reports on activity in all these areas. The information from these reports provided the ability to analyze overall and specific activity of reference service based upon the day of the week, time of day, question type, subject, resource used, duration of transaction, and the answerer's level of expertise. Data manipulation and display in this manner was necessary to accommodate another desirable objective from the procedure. Detailed information regarding reference service demands could be monitored so appropriate staffing patterns and staff development in high demand

areas could be implemented. This was possible since the program processed data acquired on all transactions and then categorized it based on professional and pre-professional encounters at the reference desk. In this respect, professional and pre-professional total and average duration of time with each transaction by subject was available. This provided the ability to learn more about reference staff capabilities and limitations with specific subjects and if, in fact, overall efficiency could be correlated with previous training and experience.

In a recent article, "Designing Optical Mark Forms for Reference Statistics", by Clark Hallman,[7] information is provided detailing the UNO expeience with this procedure for collecting and analyzing these commonly surveyed data elements for planning purposes. Hallman observed, the immediate advantage to this procedure was the prompt, labor-free tabulation of data available in usable form within days of the collection periods.[8] In addition, the cumulative, long-term results were useful for scheduling departmental activities, reference collection development and budgeting based upon the knowledge of subjects and resources used, and staff development in high demand areas. The results of the UNO study provided one measure to support the presumption that these commonly surveyed data elements could be reliably and efficiently tested with this procedure and did provide useful information for planning reference department activities.

Although the UNO experience with this reference statistics procedure was considered positive, this particular methodology did present a number of undesirable restrictions and limitations. Over a period of time, it was discovered that a major disadvantage in using this procedure was the rigidity of the program itself. To alter the program to reflect new experiences of significant additional information observed through reference service encounters meant costly adjustments in printing new optical mark scan sheets and, subsequently, the supporting computer program.

This negative aspect in the methodology of data collection posed a difficult problem in the development of the test of these same data elements for the comparative survey conducted in the UIUC libraries. As uniformity in the survey designs was essential to produce meaningful results, the same, commonly surveyed data elements had to be similarly tested in the UIUC survey. However, in order to accommodate the need for greater flexibility in the design of the UIUC survey, it was doubtful that optical mark scan sheets could be utilized. Consequently, to obtain a desirable degree of flexibility in the UIUC survey, the significant advantages regarding the efficiency of data processing afforded through the use of scan sheets would be lost. This problem was further complicated by the fact that the UIUC survey would be conducted at more than one location making survey flexibility even more desirable.

DESIGN-UIUC STUDY

The resultant compromise was to design a comparable, yet efficient manual test of these same data elements which allowed for greater flexibility in both data collection and analysis. Although this did result in some procedural inconsistencies in the two surveys, the changes were necessary to improve the effectiveness of the basic survey design and enhance the likelihood that it could be adapted to a more diverse library environment.

In the design of the form to record data, each area involved in the UIUC survey was consulted to assist in the determination of the overall and, specifically, the subject content to be represented on the final form (Figure 1). This was done to obtain a consensus of understanding on the design of the form and to ensure that unique subjects to specific reference service points would be surveyed and have direct applicability for planning in that area. Once agreement on the design of the form had been reached, specific directions regarding the appropriate procedure for completing the forms were presented to

each area involved in the survey. The survey was then implemented over a randomly selected period to represent three weeks of the Spring Semester of 1981.

Within the survey form (Figure 1), each type of activity was to be noted by simply checking the appropriate category. Completing a form in this manner was no more burdensome than the process of blackening the appropriate circles as required with the optical mark scan sheets. In fact, this method was somewhat faster as the person collecting the data did not have to be so concerned with exactly filling in the circles to ensure their machine readability. In addition, all of the data was presented on the survey form and reference to separate tables of subject categories to complete the corresponding numeric code as required on the scan sheets was eliminated. Many of the categories for recording reference activity on the form are self explanatory. However, some information regarding the approach for completing the sections is warranted.

When designing the form to record data concerning QUESTION TYPE (Figure 1), an attempt was made to develop a survey form which could categorically induce the individual to conform to the definitions outlined in the Library General Information Survey (LIBGIS) regarding reference or directional transactions. 8 As the analysis of the completed data depended on this basic understanding, it was essential that all participants in this survey clearly distinguished between the type of transaction they encountered. By including several possibilities to describe a transaction, new survey participants could more accurately complete the form without the need for training sessions on each occasion.

The DATE was to be recorded by year, month, day, e.g. 81/10/17. This could be modified through any number of variations but was conducted in this manner in the UIUC survey simply to allow for the future possibility these forms would be input through the SPSS program. The TIME of day was recorded on the 24-hour clock for the same reason. However, this could easily be represented by

indicating the time and checking a.m. or p.m. designators. The MODE of the question and LIBRARY where the question occurred should be self explanatory. The PATRON type was included to develop an awareness of the clientele served by each service point and was obtained by simply asking the patron to supply the appropriate information. The ANSWERER category reflected the status of the person completing the survey form. DURATION was simply the amount of time necessary to complete the transaction. As indicated, the QUESTION TYPE category was designed to provide guidance on the type of question. However, this category was also delineated in this manner to provide information to analyze specific types of reference questions as they were negotiated through a particular subject designator.

In the UNO survey, those resources used to answer a question were simply tallied to provide a cumulative use count and could not be connected to a subject within a transaction. In the UIUC study, the use of resources by type, such as card catalog, index, abstract, etc. was not delineated by type of resource. Rather, the nature of the inquiry was emphasized. This was done to provide data to investigate the particular strengths and weaknesses of the collection to accommodate various types of reference inquiries against a specific subject. In this respect, the ANSWERED SATISFACTORILY and ANSWERED UNSATISFACTORILY categories were unique, but important to the UIUC survey since it was conducted at more than one service point. In this category, a question was to be considered answered satisfactorily when the answerer believed he had provided the patron with the appropriate source or response to his question. A question was to be considered answered unsatisfactorily when the answerer could not satisfy the patron's information needs at the point of inquiry based upon the delineated reasons. Although there is considerable dissension regarding patrons' and librarians' perceptions of what constitutes a satisfactory response, the

analysis of data collected through the inclusion of this category in this manner does provide the ability to evaluate reference service effectiveness against several important criteria.

The SUBJECT area of the form was to be completed by indicating the primary subject interest of the patron. Again, this was to be determined by the person answering the question. Since only one subject could be checked, the survey relied heavily on the individual's completing the form to ascertain the appropriate subject from the list provided. However, if the patron's inquiry was in a subject not represented on the form, the "Other" designator could be marked and the subject could be specified. This aspect of the UIUC survey allowed for the necessary flexibility to monitor new or unique subjects encountered in the delivery of reference service. Essentially, any list of subjects could be tested with this procedure as alteration of the subject designators does not affect the process for analysis of recorded data. This flexibility allows for general or very specific tests of subject use to be conducted depending upon the environment or type of library. When determining developing areas of interest for forecasting purposes or monitoring specific areas of use, this flexibility could be beneficial.

If the inquiry had no subject, but was not directional by definition, the "No Subject-Library Related" designator was to be checked. For example, it was possible to perform a verification or Library Computer System (LCS) function that had no specific subject, but was library related. Similarly, questions such as, "Where are the indexes?" or "Do you have the Reader's Guide?" were checked as reference, but regarded as "No Subject-Library Related". These questions do not fall into the category of a verification type defined as determining the existence of an author and the form of their name or the correct title of a particular work. However, these questions could not be regarded as purely directional questions as they assume a level of acquired experience on the

part of the answerer to recognize the information needed is library related. Although this is a difficult area to test effectively, the analysis of data acquired from the "No Subject-Library Related" designator does provide some measure of the time required to respond to patrons' library related questions.

DATA ANALYSIS-UIUC STUDY

Originally, each area was provided with an allotment of forms determined by multiplying the average number of questions per day, acquired from previous semester's statistics, by 21, the number of days in the sampling period. Once each area had depleted its allotment of forms, the data was transferred to a set of three worksheets for analysis (Figures 2, 3, & 4).

After some experimentation with this procedure, it was discovered the most expedient method for analyzing recorded data by library was to first separate the completed forms into two groups based on Question type, discounting those incompleted forms. In the UIUC survey, directional questions were simply counted as a part of the total number of questions. However, these questions could be transposed to Figure 2 if more detailed analysis of this activity was needed. The remaining group of reference type questions must then be separated by subject designator. The activity in each subject area is then calculated through a corresponding set of 3 worksheets. At this point, the development of a file or similar arrangement by subject with accompanying worksheets is recommended for control in record keeping.

Once the forms have been grouped by subject, an observation from the survey form should be recorded on the worksheet by placing a tick in the appropriate square of either Figure 2 or 3. The data collected on Figure 2 supplies a visual, as well as a numeric, display of subject activity by time of day, day of week, mode of inquiry, and patron type. Since the UIUC survey was conducted in more than one library, the PATRON TYPE category was included to

provide data regarding the characteristics of the clientele served at each library. This information was useful for determining the overall appropriateness of the collection and whether emphasis or de-emphasis in certain areas should be considered or a redirection of clientele through suitable outreach programs should be enacted. The data collected on Figure 3 provides a more detailed account of the disposition of the subject transaction based upon the status of the answerer and the time required to perform a particular function. If more descriptive information regarding subject activity is required, the data from Figure 3 can be further calculated through one or more of the conditions outlined in Table 4.

The calculations in Table 4 can be performed once the total activity in each of the categories for Table 3 is known. This can be weekly, monthly, yearly, or whatever time period is appropriate depending on the nature of the survey sample or the intended purpose of the accumulated data. Table 4 is structured to provide the ability to assess percentage of activity against total activity in each possible category represented in Table 3. The information supplied from this table can indicate where the activity in a subject area is concentrated by type of reference question and the extent of time required to negotiate a satisfactory or unsatisfactory response dependent upon the status of the answerer. It is also possible to obtain information regarding the reasons for supplying an unsatisfactory response in a certain subject area. This information could be useful for monitoring collection maintenance procedures, the type of clientele not served through a particular portion of the collection, consideration of collection development in identified areas, and the need for possible staff development in certain subject areas.

CONCLUSION

The primary purpose for conducting these studies was to investigate what

data elements should commonly be considered in the development of a meaningful procedure for recording and analyzing reference transaction data for planning purposes. In this respect, the information acquired through the use of the UNO or UIUC reference statistics procedure can provide relevant, reliable data to assist with overall planning of reference department activities. Although the computer-assisted approach utilized at UNO allows for greater efficiency in data analysis, the UIUC manual approach can provide similar results at considerably less cost in libraries without access to data processing equipment. In addition, the UIUC survey form can be easily modified to accommodate analysis of reference activity in general or specific aspects of subjects depending on the need and the environment where the survey is conducted. This flexibility allows for these same data elements to be incorporated and similarly tested in various types of libraries.

The uniform testing of these data elements in the UNO and UIUC libraries provided an indication that this type of data collection and analysis could provide information to assist with the development of standard measures for further evaluation of reference service. In several areas, the concentration of activity experienced in one library was paralled by a similar degree of activity in the other two libraries. If more libraries were to similarly test these data elements, the cumulative results could provide the necessary data to develop standard procedures for measuring and evaluating reference service.

There are other studies which could be conducted utilizing the data acquired from this type of reference statistics procedure. For example, in all three libraries, Business, Education, Medicine, Literature, Political Science, and Sociology appeared within the list of the 10 most heavily requested subject areas with Business and Education ranking first or second at each library. If these general subjects were to be isolated, tested through more specific

designators accompanied by careful monitoring of referrals, more detailed information for collection development purposes could be obtained. It might then be possible to use this data to determine what, if any, correlation exists between reference and circulation activity. In this respect, procedures to project activity, such as the linear regression model discussed by Harter and Fields 9, could be tested to determine whether any significant cause-effect relationship exists regarding use of library materials and services.

There are undoubtedly other applications for the use of this data. Hopefully, the information acquired through use of these data elements will prompt such endeavors.

REFERENCES

1. Katherine Emerson, "National Reporting on Reference Transactions, 1976-1978", RQ 16:199-207 (Spring 1977).

2. Terry Weech, "Evaluation of Adult Reference Service", Library Trends 22:315-335 (January 1974).

3. Marcella Ciucki, "Recording of Reference/Information Service Activities: A Study of Forms Currently Used", RQ 16:273-283 (Summer 1977).

4. Joyce A. Edinger and Steven Falk, "Statistical Sampling of Reference Desk Inquiries", RQ 20:265 (Spring 1981).

5. Ciucki, "Recording of Reference".

6. Emerson, "National Reporting on Reference Transactions", p.207.

7. Clark N. Hallman, "Designing Optical Mark Forms for Reference Statistics", RQ 20:257-264 (Spring 1981).

8. Ibid., p.263.

9. Stephen P. Harter and Mary Alice S. Fields, "Circulation, Reference, and the Evaluation of Public Library Service", RQ 18:147-152 (Winter 1978).

FIGURE 1

DATE: __/__/__
TIME: __:__

MODE: 1. __In Person
2. __Telephone

LIBRARY: 1. __Reference
2. __UGL

PATRON: 1. Undergraduate
__(Fr) __(So) __(Jr) __(Sr)
2. __Graduate
3. __Faculty
4. __Other

ANSWERER: 1. __Professional
2. __Grad. Asst.
3. __Stud. Asst.
4. __Clerk
5. __LTA

DURATION: 1. __0-1
2. __2-5
3. __6-15
4. __16-59
5. __60+

QUESTION TYPE:
Directional: 1. __Location(s)
2. __Lib. Equipment
3. __Lib. Policies
4. __Other

Reference: 1. __Verification
2. __Reference
3. __Statistics
4. __Directories
5. __LCS (Only)

ANSWERED SATISFACTORILY:____

ANSWERED UNSATISFACTORILY: 1. __Library Resource Unavailable
2. __No Adequate Source (Patron Referred)
3. __No Adequate Source in Library System
4. __Lack Subject Expertise
5. __Other

SUBJECTS:

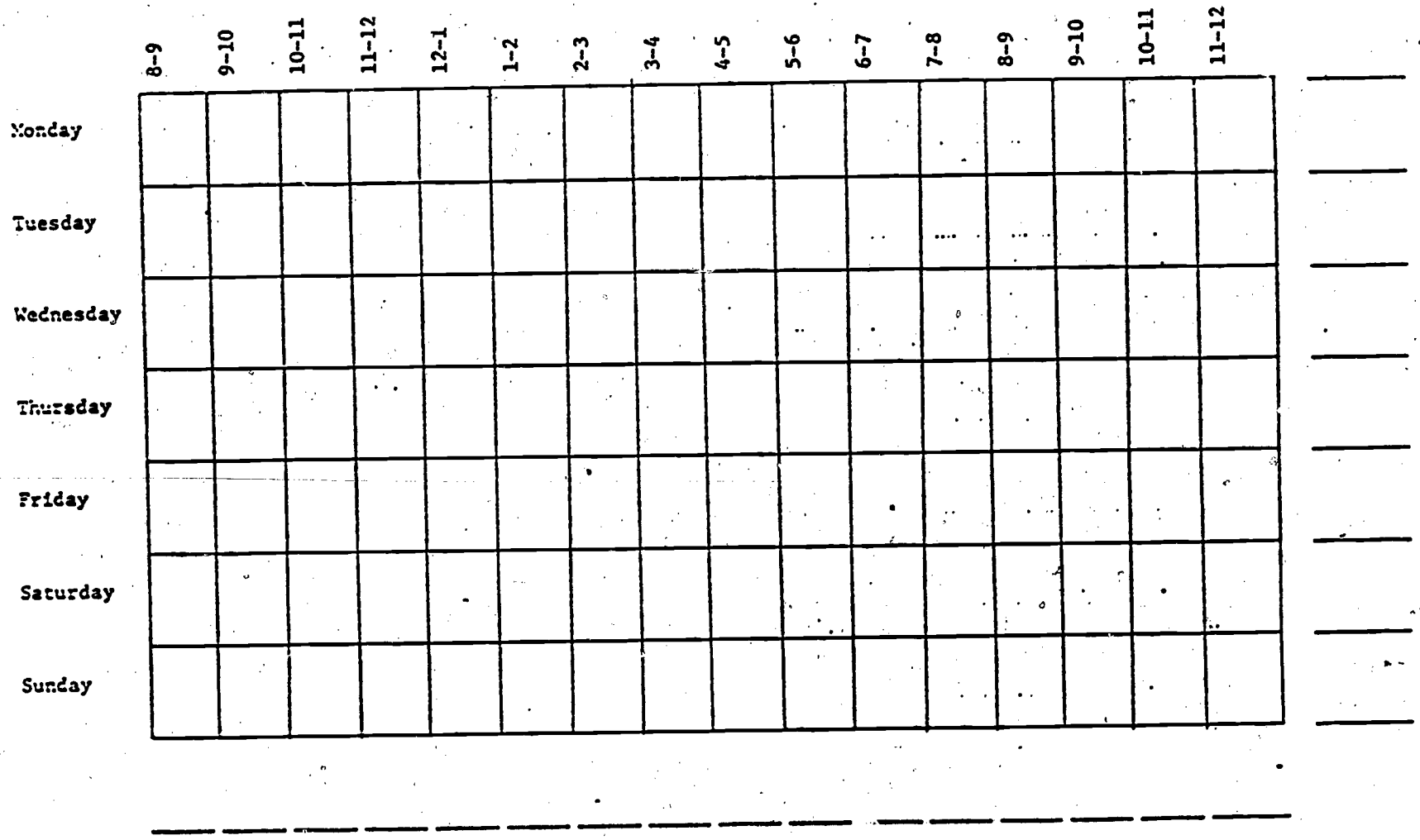
__Agriculture
__Anthropology
__Archaeology
__Architecture
__Area Studies
__Astronomy
__Art
__Biography
__Biology
__Business & Econ.
__Careers
__Chemistry
__Cinema Studies
__College Catalogs
__Communications
__Criminal Justice
__Demography
__Drugs
__Education
__Energy
__Engineering
__Environmental Sci.
__Geography
__Geology
__Grants
__Health Science
__History - U.S.
__History - Other
__Home Economics
__Language - English
__Language - Foreign
__Law
__Library Science
__Literary Crit.
__Literature - Amer.
__Literature - For.
__Local & Regional
__Mathematics
__Military Science
__Minorities
__Performing Arts
__Philosophy
__Physics
__Political Science - U.S.
__Political Science - Other
__Psychology
__Publishing
__Religion/Mythology
__Social Work
__Sociology
__Sports & Recreation
__Technology
__Transportation
__Urban Studies
__Veterinary Medicine
__No Subject - Library Related

__Other (Specify)_____

_____

FIGURE 2

Subject _____



Patron:

FR SO JR SR GRAD FAC. OTHER

Total

Telephone

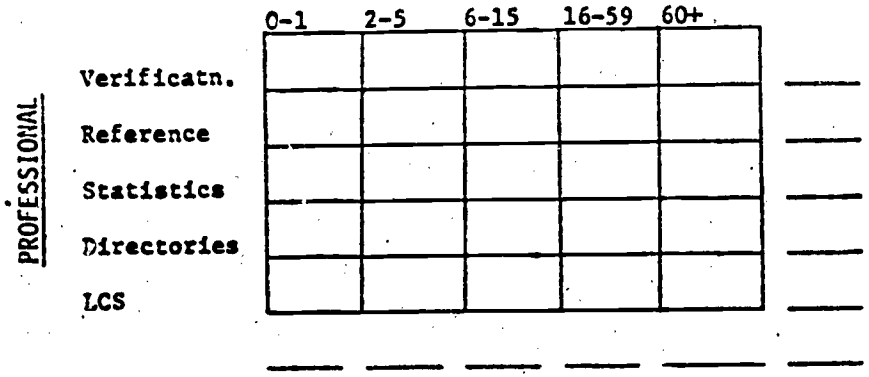
___ Total only

Subject_____

FIGURE 3

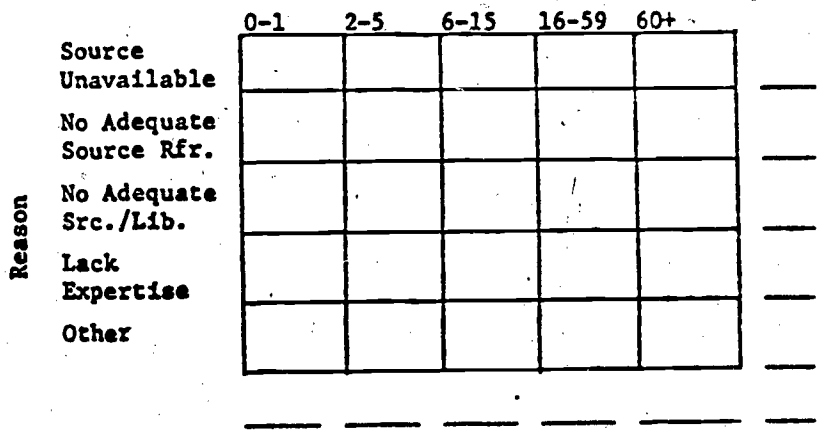
ANSWERED SATISFACTORILY

Duration



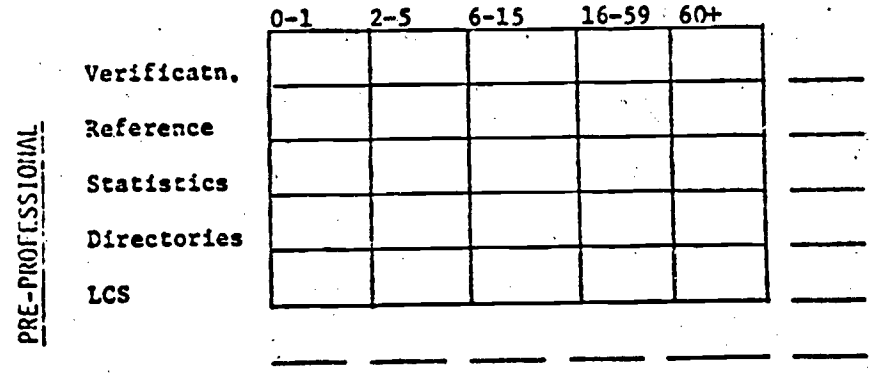
ANSWERED UNSATISFACTORILY

Duration



ANSWERED SATISFACTORILY

Duration



ANSWERED UNSATISFACTORILY

Duration

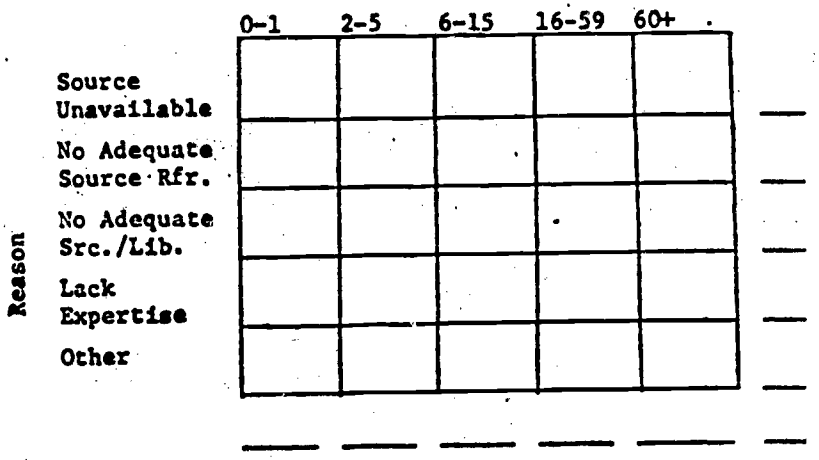


FIGURE 4

Subject: _____

Total questions: _____

Pro.	____	____%
Pre-pro.	____	____
Sat.	____	____
Unsat.	____	____
Pro. Sat.	____	____
Pro. Unsat.	____	____
Pre. Sat.	____	____
Pre. Unsat.	____	____

Reference Type:

Verif.	____	____%
Ref.	____	____
Stats.	____	____
Direc.	____	____
LCS	____	____

Total Duration:

0-1	____	____%
2-5	____	____
6-15	____	____
16-59	____	____
60+	____	____

Ave. Dur. ____ min.
Tot. Dur. ____ hrs.

Reason Unsatisfactory:

Source Unavailable	____	____%
No Adequate Source Referral	____	____
No Adequate Source in Library	____	____
Lack Expertise	____	____
Other	____	____

Total Duration Professional:

0-1	____	____%
2-5	____	____
6-15	____	____
60+	____	____

Average Duration ____ min.
Total Duration ____ hrs.

Duration Satisfactory Professional:

0-1	____	____%
2-5	____	____
6-15	____	____
60+	____	____

Average Duration ____ min.
Total Duration ____ hrs.

Total Duration Satisfactory:

0-1	____	____%
2-5	____	____
6-15	____	____
60+	____	____

Average Duration ____ min.
Total Duration ____ hrs.

Duration Unsatisfactory Professional:

0-1	____	____%
2-5	____	____
6-15	____	____
60+	____	____

Average Duration ____ min.
Total Duration ____ hrs.

Total Duration Unsatisfactory:

0-1	____	____%
2-5	____	____
6-15	____	____
60+	____	____

Average Duration ____ min.
Total Duration ____ hrs.

Duration Satisfactory Pre-professional:

0-1	____	____%
2-5	____	____
6-15	____	____
60+	____	____

Average Duration ____ min.
Total Duration ____ hrs.

Total Duration Pre-professional:

0-1	____	____%
2-5	____	____
6-15	____	____
60+	____	____

Average Duration ____ min
Total Duration ____ hrs

Duration Unsatisfactory Pre-professional:

0-1	____	____%
2-5	____	____
6-15	____	____
60+	____	____

Average Duration ____ min
Total Duration ____ hrs