ED 125 567   IR 003 651

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TITLE   Student Awareness and Use of Reference Services in a
                Large University Library.
PUB DATE   Jun 76
NOTE   57p.; Master of Arts Dissertation, University of
                Chicago

EDRS PRICE   MF-$0.83 HC-$3.50 Plus Postage.
DESCRIPTORS   *College Students; Graduate Students; Higher
                Education; Information Seeking; *Library Reference
                Services; Library Surveys; Perception; *Student
                Attitudes; Student Opinion; *Student Reaction;
                *University Libraries; Use Studies
IDENTIFIERS   Regenstein Library; University of Chicago

ABSTRACT
        A proportionate stratified random sample of
undergraduates, graduate students, and professional school students
at the University of Chicago was interviewed to determine the extent
to which they were aware of the Regenstein Library's reference
services. A rather low level of awareness of reference services was
found throughout the student body. Academic disciplines, level of
study, and length of time at the university all affected awareness of
and desire for reference services. Those students who had discovered
and consulted the reference staff were generally pleased with the
assistance they received. Data tables and a bibliography are
included. (Author/LS)

THE UNIVERSITY OF CHICAGO

STUDENT AWARENESS AND USE OF REFERENCE SERVICES

IN A LARGE UNIVERSITY LIBRARY

A DISSERTATION SUBMITTED TO

THE FACULTY CF THE GRADUATE LIBRARY SCHOOL

IN CANDIDACY FOR THE DEGREE OF

MASTER OF ARTS

BY

MOLLIE SANDOCK

CHICAGO, ILLINOS

JUNE, 1976

ACKNOWLEDGMENTS

I would like to thank Patricia Clatanoff for her generous encouragement and advice, and Abraham Bookstein for his constructive and patient guidance. I would also like to thank everyone who participated in the interviews upon which this study is based. Finally, I would like to thank Robert Benchley, without whose help this project could not have been completed.

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ABSTRACT

Little work has been done to determine why students who
do not use their academic libraries' reference and information
services fail to do so, and there has been little study of stu-
dents' awareness of such services. I interviewed a proportion-
ate stratified random sample of undergraduates, graduate stu-
dents, and professional school students at the University of
Chicago to determine the extent to which they are aware of the
Regenstein Library's reference services and to ascertain which
services the students would find most useful. A rather low
level of awareness of reference services was found throughout
the student body; academic discipline, level of study, and
length of time at the university all affected awareness of and
desire for reference services. Those students who had discov-
ered and consulted the reference staff, however, were generally
pleased with the assistance they received.

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CHAPTER I

INTRODUCTION

Many studies have been carried out concerning communication problems in reference work; they emphasize negotiating questions and overcoming communication barriers between a reference librarian or information specialist and a library patron. Very little, however, has been written about the library user or non-user who never gets as far as the reference desk. It is distressing that misunderstanding, ignorance, or ill-feeling may prevent people who could profit by the help of the reference staff from consulting them. Some members of a university community who never use their library's reference services may, in fact, not need to do so, or they may have found through past experience that their library's staff cannot help them with their reference problems. It is also possible, however, that some people don't consult the reference desk because they are sensitive about admitting ignorance or confusion by asking a question, or else because they are not aware that reference or information services exist and that they are entitled to use them.

My impression, gained from experiences both as a student and as a library staff member, is that many students at the University of Chicago do not know what services are avail-

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able from the Regenstein Library Reference Department, and, indeed, that some students are totally unaware of the existence of such a department. To determine whether this suspicion has any foundation, I designed and carried out a survey of under-graduates, graduate students, and professional school students to determine to what extent these students were aware of vari-ous services provided by the reference department and to ascer-tain which services students believe to be most useful. I also collected information about the students' use of the Regenstein and other libraries and their use of the reference service, as well as such personal data as academic program and level of study; this information allowed me to investigate possible relations between knowledge of available reference services and other variables.

I found a surprising lack of knowledge about the Regen-stein's reference services throughout the student body. Stu-dents were generally aware of only a little over half of the services available to them. Thirty-four percent of the stu-dents questioned had never consulted the reference department, and eighteen percent did not know where it was. Many people expressed a desire for services which are currently being pro-vided but which they did not realize already exist--so many, in fact, that if everyone were aware of these services, the refer-ence staff at its present size would be wholly incapable of dealing with the increase in demand. For example, the depart-ment would receive almost twice as many incoming telephone calls from students if everyone who wanted to ask for information

over the telephone knew that he could do so. Although some groups or catagories of students were better informed than others, the level of awareness of reference services throughout the student body was generally low. Students' accounts of the ways in which they learned of the existence of the reference department suggest that the library's handbook and other printed directional materials are not effective in informing most people about the department, nor are signs or graphics in the library. Students' evaluatory comments, however, reveal that those who have discovered and made use of the department feel favorably about the services, collection, and staff that they encountered.

CHAPTER II

EARLIER WORK

There have been previous attempts to determine reasons
for non-use of reference services and to ascertain users'
awareness of these services. "Why Don't They Ask Questions?"[1]
by Mary Jane Swope and Jeffrey Katzer describes a study carried
out at Syracuse University in 1972; one hundred and sixty peo-
ple in Syracuse's Carnegie Library were approached, asked
whether they had a "question," asked if they would take that
question to a reference librarian, and if they would not, they
were asked why not. The article unfortunately never explains
clearly what is meant by "having a question," and what precau-
tions were taken to ensure that all the respondents and the
investigators understood that term to mean the same thing.
This unexplained phrase might have caused confusion among the
respondents as well as among those who try to understand the
implications of the study. The people questioned were selected
randomly from the card catalog area, the reference room-index
area, and the open stacks, since it was felt that these areas
would be more likely than other parts of the library to contain
users with "questions." The sample is biased in that it is

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[1] Mary Jane Swope and Jeffrey Katzer, "Why Don't They Ask
Questions?" RQ 12 (Winter 1972): 161-166.

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most likely that heavy users of the library would be approached
and certainly impossible that non-users of the library be
approached. Similarly, if the researchers were correct in
believing that the areas in which they sought respondents had a
higher density of people with problems, then it is hard to see
how their results can be extrapolated to the general popula-
tion of library users. Nonetheless, some of the conclusions of
the study were quite suggestive. Swope and Katzer write that
41 percent of the respondents had "questions," and of those
people, that 65 percent would not ask a librarian for help.
The three most frequently given reasons for avoiding the refer-
ence staff were dissatisfaction with past service (ten people),
a feeling that the question was "too simple" for the librarian
(seven people), and a feeling that they should not "bother" the
librarian (seven people). The last two catagories suggest that
there may be substantial numbers of people who need help 'n
using a library but who do not realize that there is a depart-
ment in the library whose responsibility it is to help them, or
who at least are uncertain about the sort of help they could
request. It is possible, however, that this result in part
reflected differences in interpretation of what was meant by
"having a question," which is not necessarily the same thing as
"being in need of assistance." In a subsequent letter to RQ,[1]
Jeffrey Katzer calls for further, more extensive study of rea-
sons for such non-use.

Some of Swope and Katzer's findings are similar to those

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[1]Jeffrey Katzer, Letter to the Editor, RQ 14 (Fall 1974):
86-88.

of a study done ten years earlier at Southampton University.[1]

In May, 1962., 201 written questionnaires were sent out to a
stratified sample of undergraduate students, 187 of whom com-
pleted and returned them. The questionnaire recorded students'
extent and type of library use, methods of doing research in
the library, and attitudes about many of the library's services
and staff. Thirty-nine percent of the students who completed
the questionnaire said that they were reluctant to put queries
to the library staff; first year students expressed more reluc-
tance than second or third year students, and there were dif-
ferences among the different academic disciplines as well. "Of
those students who expressed reluctance to put queries, 70 per-
cent felt their question was too elementary, 23 percent thought
the staff appeared too busy to deal with it, and 12 percent
thought they would probably not be able to help."[2] When asked
whether the library staff could help with a "subject query"
which a student was not sure how to begin or pursue efficiently,
51 percent replied that the possibility had never occurred to
them; again first year students were less likely to approach
the staff than second and third year students. At Southampton,
as at Syracuse University, there apparently was a group of stu-
dents unaware of the existence of reference or information ser-
vices or unsure about what to expect from such services.

A wider and more recent study of faculty awareness of

[1]Maurice B. Line, "Student Attitudes towards the University
Library: A Survey at Southampton University," Journal of Docu-
mentation 19 (September 1963): 100-117.

[2]Ibid., p. 111.

and attitudes towards their libraries' reference services was carried out by Jerold Nelson.[1] He sent questionnaires to a random sample of faculty members of six state colleges and universities in California: 1,067 were sent out and 73 percent were returned. Nelson listed thirteen services which a reference department might provide and asked the faculty members whether or not each service was provided by their own library, or whether they did not know whether or not it was. He also asked the respondents to indicate the degree to which they considered each service to be desirable, and whether they thought that it was provided to them at present: he found that "for nearly every service, there were individuals who desired the service without knowing that it was already being offered."[2] It is possible, however, that a respondent might consider a service "desirable" in general even though it was not useful to him personally. The average faculty member was aware of barely half of the services which were actually available at his library. Nelson's list of possible services incorporated some reference jargon or technical phrases, e.g., "vertical files," "demand bibliographies," "literature search," which may have been unclear to some respondents. On the other hand, some respondents, believing the question was intended to reveal facts about their library rather than test their familiarity with

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[1]Jerold Nelson, "Faculty Awareness and Attitudes toward Academic Library Reference Services: A Measure of Communication," _College and Research Libraries_ 34 (September 1973): 268-75.

[2]Ibid., pp. 273-74.

library services, may have called their libraries and asked
about the services available; these two effects may or may not
have cancelled each other out, but they do weaken our confi-
dence in the results. At any rate, the surprising proportion
of faculty members who were found to be ill-informed about ser-
vices offered by their own libraries is consistent with the
Katzer and Swope findings, and does suggest a need for further
research.

A study done two years ago at the University of Chicago
Regenstein Library is of interest because it concerned some of
the same groups of clientele as the present study. On February
20, 1974, a questionnaire was distributed to everyone who
entered the Regenstein Library between 8:30 A.M. and 10:00 P.M.
by a Student Committee on the Library.[1] This questionnaire was
designed to measure users' attitudes towards various library
policies and facilities: the user was asked how often he used
each of several services (Entrance/Exit, Reference Area first
floor, Reserve, Special Collections, Masterfile, Microfilms,
Search/Trace, Recall, Card Catalog first floor, Canteen, and
others), how he would rate the staff in each area, and his
overall rating of each area. Unfortunately, the users' ratings
of reference staff and their overall evaluations of the refer-
ence area were not included in the committee's report, but the
report does note that the "average user," or at least the aver-
age user who was given and completed the questionnaire, appears

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[1]Student Advisory Committee on the Library, "Library Ques-
tionnaire," University of Chicago, 1974. (Mimeographed.)

at the reference desk about once a month. There was some feeling that the hours of reference service should be extended, but this was less of a priority to those questioned than buying more books and journals and expanding canteen facilities. It was also found that slightly over 25 percent of the respondents were undergraduates, and that graduate students in the social sciences and humanities were present in numbers much greater than their percentage of the total student body. Over 92 percent of those returning the questionnaire were University of Chicago students; the others were faculty members, staff, and visitors, in decreasing frequency. While this study did not address the issues in which I am interested specifically, it gives some insight about the activities and identity of the heavy users of the Regenstein Library.

CHAPTER III

METHODOLOGY

The Population

The Student Advisory Committee on the Library study, as
well as less formal observations, shows that University of Chi-
cago students constitute by far the largest group using the Reg-
enstein Library. Since the research needs of faculty, staff,
and visiting scholars are of great importance to the library
staff, it would have been interesting to carry out a study of
both the student body and the faculty, but time and resources
did not permit such an undertaking. The problems involved in
trying to win the cooperation of the already over-studied and
over-interviewed group of professors were another consideration.
Undergraduate, graduate, and professional school students, then,
constitute the population being studied; practical considera-
tions suggested that a sample of 100 to 150 students be inter-
viewed.

There could be some question about including in the
sample groups such as undergraduates, students in departments
having their own separate libraries, and students in profes-
sional schools having their own libraries. I did include these
catagories because the Regenstein general reference department
is the "court of last resort" for reference problems for the

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whole."[1]   In other words, I wanted to learn not only what the
student body as a whole knew about the library's reference ser-
vices, but also what graduate students in the humanities, or
undergraduates in the sciences, or students in the Business
School, knew as well.   Another advantage of stratification is
"the reduction of variances of the sample results for the
entire population . . . greater precision is obtained for the
sample estimates, a constant goal of sample design."[2]   A pro-
portionate stratified random selection of elements has further
advantages; if the sample is proportionate, that is, if the
number of people in each sub-group is proportionate to the num-
ber of people in each group in the population, the sample is
"self-weighting."   "The term self-weighting denotes that in
calculating the sample mean, the sample cases are simply added
without any special weighting procedure . . . Proportionate
stratified sampling of elements is often in the back of people's
minds when they talk of 'representative sampling,' when they
insist that the different parts of the population must be prop-
erly represented."[3]   My strata were roughly proportionately
represented, except for two sub-groups, the Divinity School and
the Library School, which if sampled exactly proportionately to
their numbers in the population would have had fewer than five
people chosen to be interviewed; since it is a generally ac-
cepted rule of thumb to have at least five elements in each

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[1]Leslie Kish, "Selection of the Sample," in Research Meth-
ods in the Behavioral Sciences, ed. Leon Festinger and Daniel
Katz (New York: Dryden Press, 1953), p. 192.

[2]Ibid., p. 191.   [3]Ibid., pp. 193-95.

sub-group, I increased those, two groups to five members.

The population was divided into the following thirteen

strata:

Freshmen and undergraduate students-at-large
Undergraduates in the humanities.
Undergraduates in the social sciences
Undergraduates in the sciences
Graduate students in the humanities
Graduate students in the social sciences
Graduate students in the sciences
Business School
Divinity School
Law School
Medical School
Graduate Library School
School of Social Service Administration

Using the Registrar's alphabetical list, I associated each stu-

dent with one of these strata by means of numerical codes used

by the Registrar to indicate department and level of study.

There were 7,940 people in the entire population; a sample of

1.5 percent of the population is 119 people, and a sample of

1.5 percent of each sub-group, with the numbers rounded off to

avoid the necessity of interviewing .6 of a person, comprises

124 people. I chose a random sample of 1.5 percent of each

subgroup by assigning each individual on the alphabetical list

to a stratum, marking a distinct symbol for that stratum next

to his name, choosing numbers from a random number table for

the required number of subjects in each stratum, ordering the

random numbers, and choosing the individuals whose positions on

the list corresponded to the random numbers for each group.

The size of each sub-group and the sample taken from it is

shown in table 1, as is the number of people successfully

interviewed in each group.

TABLE 1

SIZE OF EACH SUB-GROUP AND ITS SAMPLE

Subgroup	Number in Population	Number in Sample	Interviews Completed
Freshman	795	12	9
Undergraduates-Humanities .	418	6	3
Undergraduates-Sciences . .	620	9	7
Undergraduates-Social Sciences	640	10	8
Graduate Students-Sciences .	717	11	6
Graduate Students-Humanities	816	12	12
Graduate Students-Social Sciences	1377	21	18
Business School	846	13	9
Divinity School	266	5	4
Law School	474	7	6
Medical School	448	7	5
Graduate Library School . .	99	5	5
Social Service Administration	424	6	6
Total	7940	124	98

The Form of Interview

I originally considered collecting data with written
questionnaires, since I could reach a large number of people
more easily with them than with interviews, but I rejected this
idea because it seemed unlikely that substantial numbers of
this often-studied population would return questionnaires.

Also, with careful probing by the interviewer, personal inter-
views can elicit information in greater depth. The presence of
an interviewer giving complete attention to the respondent's
views insures a more complete response than a piece of paper
which can be easily ignored. Robert L. Kahn and Charles F.
Cannell have devoted an entire book essentially to explaining
how an interviewer can motivate people effectively to partici-
pate in an interview;[1] they argue that a person-to-person
interaction can be very effective in securing the interest and
cooperation of someone who is not greatly interested in the
subject in question. However, interviewing 124 people, some of
whom live twenty miles from Chicago, would be difficult if the
interviews were to be carried out in person at each respondent's
home, so I decided to interview by telephone, which is consid-
erably more convenient and still retains many of the advantages
mentioned above of the personal interview. In fact, no one
whom I reached on the telephone refused to be interviewed,
although several requested that I call back at a more conveni-
ent time.

The Questions

I considered the wording of the questions to be a mat-
ter of great importance. Stanley L. Payne has shown in The Art
of Asking Questions[2] that replacing words in a question by what

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[1]Robert L. Kahn and Charles F. Cannell, The Dynamics of
Interviewing (New York: John Wiley and Sons, 1966).

[2]Stanley L. Payne, The Art of Asking Questions (Princeton:
Princeton University Press, 1951).

seem to be synonyms can greatly influence the way people respond. Questions can be inadvertantly "loaded" to encourage certain answers, or, if they are unclearly worded, construed differently by different respondents. Questions which give a person a choice between two or more possible answers produce different results from "open" questions which make it necessary for him to form his own answer. Even changing the interviewer's stress on certain words in a spoken question can lead to different responses, although the "same" question is asked in each case. Questions which are intelligible on paper when read by an educated person are not necessarily intelligible when heard over the telephone; I found, after pretesting the questionnaire with a number of students, that some concepts had to be stated more simply to be understood in a telephone conversation. Although questions must be brief and clear for use under these circumstances, they still must not imply a "correct" or acceptable answer; for the purposes of this study especially, questions had to be phrased in a non-threatening way to make it possible for a student to admit a lack of knowledge or non-use of the library or its services. For example, the question, "Have you ever had occasion to use the reference department?" does not imply that the student is culpable if he has not; similarly, some people are more willing to say that they are "not sure" of something than that they "don't know." On the basis of these considerations and the experiences of pretesting, I constructed the following interview schedule:

Hello, are you (student's name)?

You have been selected to represent (student's sub-group) in a study on student library use. I am doing a study to find out how well the Regenstein Library makes its services known to its users. I am especially interested in finding out how much people know about the services of the reference department. Can I ask you a few questions about your experiences with the library?

1. Have you ever had occasion to use the Regenstein Library?

   Do you study there with your own books, or check out books, or do research, or what?

   How many times have you used the library over the last month?

   Do you usually use another library on campus or elsewhere?

2. At the Regenstein Library, is it hard to find the Reference Desk?

   Do you know where it is?

3. Have you ever had occasion to use the reference department before?

   How many times over the past month?

4. In your estimation, what does the reference department do?

5. I am going to ask you a list of questions about the services of the reference department. You can answer by saying "yes," "no," or "not sure." OK?

6. A. Will they help you use the card catalog if you're having trouble?

      Would it be useful to you personally if they did? - Would you ever find that helpful?

   B. Will they help you use indexes, abstracts, and other reference books?

      Would that be useful to you personally?

   C. Will they direct you to reference tools somewhere else in the library?

      Would that be useful to you?

   D. Will they help you find addresses or phone numbers

of people or of institutions?

Would that be useful to you?

E. Will they help you find book reviews?

Would that be useful to you?

F. Will they help you find journals or periodicals in the library?

Would that be useful to you?

G. Will they put together a bibliography for your thesis, if you had to write a thesis?

Would that be useful to you?

H. Will they help find the answer to a factual question, like "How high is Mount Everest?" or "When did Illinois become a state?"

Would that be useful to you?

I. Will they answer questions over the phone?

Would that be useful to you?

J. Will they write a resume for you if you are looking for a job?

Would that be useful to you?

K. Will they find out if other libraries have the materials you're looking for, if Regenstein doesn't have them?

Would that be useful to you?

L. Will they give you a letter of introduction or a pass so that you can use other libraries?

Would that be useful to you?

M. Will they borrow materials from other libraries so that you can use them here--interlibrary loan?

Would that be useful to you?

N. Will they search machine-readable data bases for you at your expense?

Would that be useful to you?

O.   Do they give orientation tours of the library?

     Would that be useful to you? .

Thank you very much.

7.   Can you tell me how you learned about the existence of
     the reference department?

8.   Are there any comments you would like to make about the
     reference service at Regenstein, or about the library
     in general? Any comments, complaints, horror stories,
     suggestions?

Thank you. You've been very helpful.

     I chose the services listed above by examining journal

literature on reference and information services and the li-

brary's publically available reader information bulletins and

handbook. I learned through examining the reader information

bulletins and handbook and by speaking with Mrs. Christine

Longstreet, Head Reference Librarian, Mrs. Patricia Clatanoff,

Assistant Reference Librarian, and other members of the refer-

ence staff, that all of the services except G (compilation of a

bibliography for a thesis), J (resume-writing service), and N

(search of machine-readable data bases at the user's expense),

are provided at the Regenstein Library reference desk. We

included three services that were not available to detect pat-

terns of answering "yes" to every question; these three ser-

vices sound plausible even though they are not provided by the

reference department. In retrospect, it might have been a bet-

ter idea to have included several more questions to which the

correct answer is "no" and several fewer to which the correct

answer is "yes." One complication that was unforeseen involved

Billings Hospital's MEDLINE service; several medical students

and graduate students in the sciences answered question N, the
question concerning machine-readable data bases, by refering to
that service, and I decided to count such answers as correct
since they indicated knowledge of an existing reference facil-
ity, although one not under the aegis of the reference depart-
ment.

Carrying Out the Interviews

These interviews were carried out during the last two
weeks of November and the first week of December, 1975. It was
necessary to wait at least a month into the Fall Quarter in
order to be able to ask people about their activities "over the
past month." I decided that it was advisable to wait a little
longer than that in order to get a representative time not
including the very first weeks of the school year; this seemed
especially important for interviews with students entering the
university for the first time. It would have been impractical,
on the other hand, to try to interview people during finals
week; although the interview took only six to twelve minutes,
depending on the loquacity of the respondent, students would be
less likely to devote even that amount of time to an interview
during the last week of the quarter.

Many of the students in the sample proved exceptionally
difficult to reach by telephone. All but five had telephone
numbers listed with the registrar; many of these, however, were
hotel or apartment switchboards or dormitory phones, and by the
time of the interview fully one-fourth of the numbers were no
longer correct. Of the five people whose telephone numbers were

not on the registrar's list, two were successfully reached
through telephone information; two others did not have a tele-
phone and were interviewed in person, with every attempt being
made to approximate the conditions and atmosphere of the tele-
phone interviews; and the fifth person was never reached. A
number of the people who appeared on the list were studying
abroad, had a temporary leave of absence, had left school by
the time of the attempted interview, or had apparently dropped
off the face of the earth; 98 of the 124 were finally inter-
viewed.

CHAPTER IV

RESULTS

The combined sample's answers to all questions are
shown in tables 2, 3, 4, and 5. It is noteworthy that everyone
in the sample answered "yes" to the first question: every stu-
dent claims, in answer to a question put in a non-threatening
way, to have used the Regenstein Library at least once. It
appears from the survey that students either use the library a
great deal or very seldom; few people are in the intermediate
catagories. This result is different from that of the Student
Advisory Committee study, which found a great deal of heavy use,
some moderate use, and very little light use of the library:
that study, however, was biased toward heavy users of the li-
brary because questionnaires were given only to people who
entered the library. I have been unable to find for purposes
of comparison, another study of frequency of library use which
used use-frequency catagories comparable to mine.

Although everyone had used the Regenstein Library, a
surprising 18 percent of the respondents did not know where the
reference desk is. This conclusion withstood subsequent care-
ful probing on the part of the interviewer: 22 percent answered
"no" or "not sure" when asked if they knew where the reference
desk was, but 4 percent proved by their later answers that they

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TABLE 2

COMBINED SAMPLE'S ANSWERS TO QUESTION 1

Ever used Regenstein?			Ever use other libraries?		
Yes	98	100%	Library	Number	Percentage
No	0	0%			
How often last month?			Yes, unspec-		
			ified	3	3.1
			Harper	34	34.7
Frequency of use	Number	Percentage	Eckhart	11	11.2
			Chemistry	2	2.0
			Billings	6	6.1
0-4	49	50.0	Law	6	6.1
5-9	10	10.2	SSA	5	5.1
10-14	8	8.2	Art	2	2.0
15-19	7	7.1	None of		
20-24	3	3.1	these	25	25.5
25-29	6	6.1	Other	11	11.2
30 or more	15	15.3			
Total	98	100	Total	105	107

did know and had used the reference collections or interlibrary loan. We also found that the 18 percent who did not know where the reference department is knew considerably less about its services than the rest of the sample did; these results are discussed below. Thirty-four percent of the respondents have never consulted the reference staff. The answers to the second part of question 3 indicate a lower level of use of reference services than that found by the Student Advisory Committee survey, which found the "average user" appearing at the reference desk once a month; we note again however, that their sample was biased toward heavy library users. In response to a challenging open question, "In your estimation, what does the reference department do?" 22 percent said that they did not know, were

TABLE 3

COMBINED SAMPLE'S ANSWERS TO QUESTIONS 2-4

Hard to find reference desk?			Do you know where it is?		
	Number	Percentage	Yes	80	82%
			No	18	18%
Yes	27	27.6			
No	35	35.7	**Ever used reference?**		
No opinion	36	36.7			
Total	98	100	Yes	65	66%
			No	33	34%
What does reference dept. do?			**How often last month?**		
	Number	Percentage		Number	Percentage
Don't know	22	22.4	0	75	76.5
Keeps reference collection	22	22.4	1	10	10.2
Helps find articles, books	46	46.9	2	8	8.2
			3	0	0
Gives information	24	24.5	4	1	1
			5	2	2
Other	4	4.1	6 or more	2	2
Total	118	120	Total	98	100

not sure, had no idea, etc., but the others suggested largely
accurate answers which fell broadly into three catagories:
maintaining a reference collection, helping the user find books
or articles which he could not find himself, and giving infor-
mation or answers to question. A number of people gave more
than one of these answers, so that the total number of responses
to question 7 was 118, rather than 98. A few students had the
reference department confused with the reserve room.

The responses to the fifteen parts of question 6, shown
in table 4, are very important for this study: they indicate
how familiar University of Chicago students are with the ser-
vices of the reference department. A rather low level of

TABLE 4

COMBINED SAMPLE'S ANSWERS TO QUESTION 6

Services	Yes		No		Not Sure	
	No.	%	No.	%	No.	%
Help with card catalog	68	69	3	3	27	28
Would find useful	71	72	21	21	6	6
Help with indexes, abstracts, etc.	69	70	3	3	26	27
Would find useful	88	90	8	8	2	2
Direct to reference tools elsewhere	71	72	1	1	26	27
Would find useful	82	84	9	9	7	7
Addresses or phone numbers	29	30	5	5	64	65
Would find useful	52	53	33	34	13	13
Book reviews	36	37	5	5	57	58
Would find useful	52	53	44	45	2	2
Help in finding periodicals	77	79	5	5	16	16
Would find useful	95	97	3	3	0	0
Bibliography for thesis*	1	1	59	60	38	39
Would find useful	14	14	77	79	7	7
Factual question	41	42	25	26	32	33
Would find useful	37	38	56	57	5	5
Service by telephone	41	42	9	9	48	49
Would find useful	72	73	20	20	6	6
Resume-writing*	2	2	75	77	20	21
Would find useful	6	6	81	84	10	10
Search other libraries for materials	73	74	0	0	25	26
Would find useful	82	84	15	15	1	1
Letter or pass to other libraries	43	44	4	4	51	52
Would find useful	86	88	8	8	4	4
Borrow materials--Interlibrary loan	53	54	5	5	40	41
Would find useful	78	80	15	15	5	5
Machine-readable data bases*	16	16	8	8	67	68
Would find useful	28	29	47	48	16	16
Orientation tours	73	74	2	2	23	23
Would find useful	75	77	13	13	10	10
Medline	7	7				
Would find useful	7	7				

*Services not provided

awareness of many services is evident. Some services, such as helping a student find periodicals, giving orientation tours, determining whether other libraries have desired materials, and directing a student to reference tools elsewhere in the library, are known to roughly three-fourths of the students; fewer students know that they can receive help in using indexes, abstracts, and other reference tools, help in using the card catalog, or interlibrary loan services; considerably fewer than half of the students are aware that the reference staff will provide a letter or pass to other libraries, help with a factual question, service by telephone, and access to book reviews and addresses of people or institutions. Figure 1 illustrates which services are best known and which have the highest level of usefulness to the respondents; it is evident that in a number of cases a large number of people expressed a desire to make use of an available service which only a small number of people now know exists, although "desired" and "will actually use" can be two different things. In every case except that of help in answering a factual question, the number of people who want a specific service is greater than the number of people who know that it is available. It is interesting to note that 97 percent of the sample feel that they need help in locating periodicals in the library. At least five people feel sure that there is a public periodicals catalog at Regenstein; there is not.

Table 5 shows that in response to the open question, "Can you tell me how you learned about the existence of the
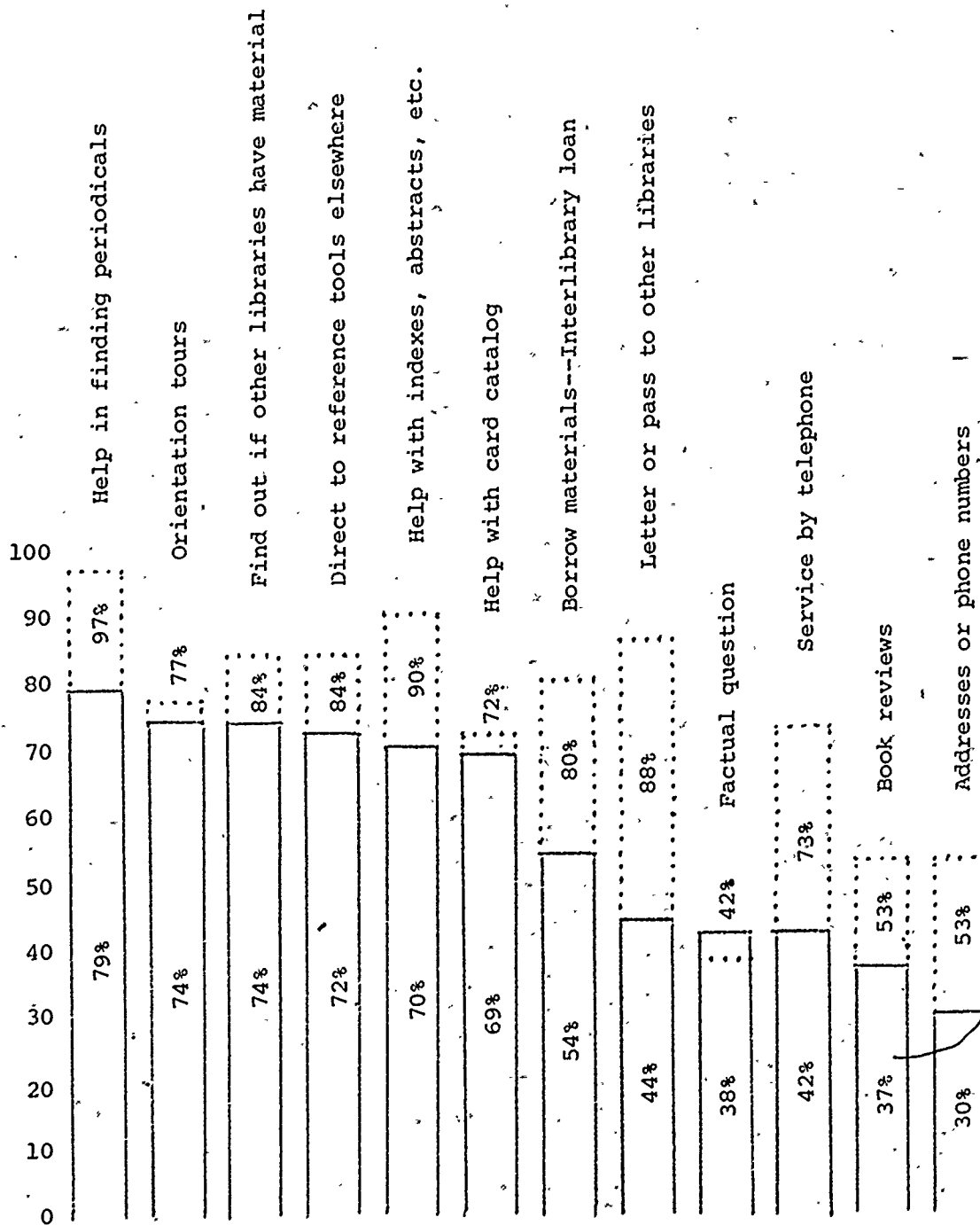
100
90
80
70
60
50
40
30
20
10
0

Help in finding periodicals — 97% / 79%

Orientation tours — 77% / 74%

Find out if other libraries have material — 84% / 74%

Direct to reference tools elsewhere — 84% / 72%

Help with indexes, abstracts, etc. — 90% / 70%

Help with card catalog — 72% / 69%

Borrow materials--Interlibrary loan — 80% / 54%

Letter or pass to other libraries — 88% / 44%

Factual question — 42% / 38%

Service by telephone — 73% / 42%

Book reviews — 53% / 37%

Addresses or phone numbers — 53% / 30%

Fig. 1. Overall awareness of and desire for twelve services.

TABLE 5

COMBINED SAMPLE'S ANSWERS TO QUESTIONS 7-8

How did you learn about reference department?

	Number	Percent
Sign	3	3.1
Library information	2	2.0
Just ran into it	18	18.4
Professor or student	8	8.2
Expected to find one	33	33.7
Tour	10	10.2
Asked other library staff	20	20.4
Knows staff	5	5.1
Not sure	4	4.1
Didn't find	8	8.2
Total	111	113

Comments

	Number
Reference favorable	20
Reference unfavorable	4
Regenstein favorable	9
Regenstein unfavorable	23
Praise for specific person	1
Complaint about specific person	1
Other	6
No comment	27
Total	91

Specific Complaints[*]

Government documents	2
Periodicals	9
Guidebooks and signs	14

[*]Also included above.

reference department?" people provided a number of methods by
which they said that they found the department. It is rather
striking that only three people saw a sign directing them to
the reference desk and that only two people read about the
department in the library handbook or user information bulle-

tins. The lack of explanatory or directional graphics in the Regenstein Library has been discussed in many quarters. These comments reveal the impact of the graphics on my respondents: one of the three people who saw a sign said, "I saw the desk and the people and activity, and then I saw a very small sign"; another said, "I was standing by the card catalog, looking, straight up at the ceiling, and I saw a sign." The largest catagory of answers was from a group of people who said rather vaguely that they had used libraries extensively before and that they "expected" to find a reference department. The next largest group asked a question of someone else on the library staff, usually someone at circulation, someone filing cards at the catalog, or someone at exit control, and was referred to reference: "I asked a guard where the encyclopedias were and he told me to ask at the reference desk." The third largest group ran into the department fortuitously: "I was wandering around the catalog, and I figured those people over there must be doing something--I was never formally informed." Others were informed by a professor or another student, took a tour of the library which pointed out the reference desk, or else knew a member of the library staff.

The comments elicited by the last question showed a great range of concerns and attitudes. Favorable comments about the reference staff, such as "I have had good experiences with them--they helped me find the name of a nineteenth-century periodical when I only knew the abbreviation," or, "The people I talked to were very helpful--they went out of their way to

find out about a citation for me," were gratifying, but there
were also a few comments such as, "We had a difficult time
looking for some government publications--the people there did
not seem to know how to get at them, and I didn't know either--
it's not a very efficient set-up." Favorable comments about
the Regenstein in general mentioned its excellent collections
and good atmosphere for study, whereas unfavorable comments
mentioned its poor collections and uncongenial atmosphere for
study. There were complaints about the library being too cold
and too hot and too noisy and too sepulchral. One member of
the reference staff was mentioned by name unfavorably, another
favorably. Comments falling into the "Other" catagory were fas-
cinating although not directly relevant to this study: they
included a theory about why the carpet in Regenstein wears out
more quickly in some places than others and what can be done
about it, a theory that what students believe to be the sound
of the heating system is really "white noise" piped in to ren-
der the students docile, and a dinner invitation for the inter-
viewer. Three types of specific complaints stand out: com-
plaints about the number and quality of guidebooks and signs,
complaints about the way in which periodicals are organized in
Regenstein, and complaints about the organization of government
documents in the library. Most of these specific complaints
were made by graduate students in the humanities and social
sciences. Here is one comment about the lack of signs and
library information:

    Maybe there should be a central sign telling you where
    to ask questions . . . I wish it was clearer how to use the

, library; I don't know how to proceed, where to go. I've
picked up their written material but it's not definite
enough. There should be some introductory service for
incoming students; I took a tour but they threw a lot at us
all at once, I couldn't take it all in. When I went to use
the library I was still confused.

Another comment:

Reference ought to be more clearly recognizable. I
would like to know whom you can ask about what.

Complaints about the organization of periodicals ranged from

"Why isn't there a periodicals catalog? That would be extremely

useful," to, "I can't tell you over the telephone what I think

of the way they hide magazines in that library." The number of

spontaneous grievances about periodical organization, taken

together with the extremely high percentage of people who feel

that they need help in locating them, indicates an area of par-

ticular concern for the library.

In table 6 the data on student awareness of reference

services is broken down by student category. Cummulated data

for all of the undergraduates as a group, as well as all of the

graduate students and all of the professional school students

are also given. Fourteen people who had changed their addresses

and phone numbers before their interviews and were unusually

hard to reach were also considered as a separate group to de-

termine whether this peripatetic group of students had in com-

mon characteristics of library use or awareness which differen-

tiated them from the rest of the population; the eighteen peo-

ple who did not know where the reference desk was were also

treated as a separate group.

As a measure of difference among the groups I used

TABLE 6

PERCENT AWARENESS OF AND DESIRE FOR TWELVE SERVICES

	Complete sample-98	Undergraduates-27	Grad. students-36	Professional Schools-35	Changed addresses-14	People who don't know where ref. dept. is-18
Help with card catalog	69/72	63/78	75/75	69/66	64/71	50/78
Help with indexes, abstracts, etc. . .	70/90	56/93	72/92	80/86	57/93	44/89
Direct to ref. tools elsewhere . .	72/84	60/78	78/81	77/91	79/36	39/78
Addresses or phone numbers	30/53	26/44	17/58	46/54	43/64	6/56
Book reviews	37/53	22/56	42/61	43/43	57/64	28/50
Help in finding periodicals	79/97	63/100	81/92	89/100	64/100	50/100
Factual questions . .	42/38	41/30	31/42	54/40	50/50	39/39
Service by phone . . .	42/73	30/63	42/92	51/63	36/50	22/50
Find out if other libraries have . . .	74/84	60/93	92/92	69/69	71/71	61/94
Letter or pass to other libraries . .	44/48	41/89	39/94	51/80	36/86	28/83
Borrow materials- Interlib. loan . . .	54/80	30/82	78/81	49/77	57/86	33/89
Orientation tours . .	74/77	52/70	81/92	86/66	79/86	39/72

NOTE: 69/72 means that 69 percent are aware of a service but 72 percent would like to use it.

Freshman-9	Undergrads. Humanities-3	Undergrads. Sciences-7	Undergrads. Social Sciences-8	Grads. Sciences-6	Grads. Humanities-12	Grads. Social Sciences-18	Business School-9
44/56	67/100	71/100	75/75	67/100	100/67	61/67	56/67
56/78	33/100	71/100	50/100	67/100	83/67	67/100	56/100
56/78	0/33	71/100	75/75	33/67	92/58	83/100	67/100
0/33	0/100	71/14	25/63	0/100	25/58	17/44	22/33
22/56	0/100	29/29	25/63	50/67	67/50	22/67	44/44
56/100	33/100	100/100	50/100	67/100	75/83	89/94	89/100
67/33	0/0	57/71	13/0	0/33	58/50	22/39	22/33
22/78	67/100	29/71	25/25	67/83	42/100	33/89	33/56
44/78	33/100	100/100	50/100	100/100	92/100	94/83	78/56
22/67	0/100	71/100	50/100	67/100	50/100	22/89	78/78
22/67	33/33	43/100	25/100	67/100	75/100	83/61	67/78
33/56	33/100	86/57	50/88	33/100	100/100	83/83	78/56

TABLE 6--Continued

	Divinity School-4	Law School-6	Medical School-5	Graduate Library School-5	Social Service Administration-6
Help with card catalog	100/100	100/67	40/0	60/60	67/100
Help with indexes, abstracts, etc.	100/75	100/67	80/60	60/100	100/100
Direct to ref. tools elsewhere	100/75	100/100	80/60	60/100	67/100
Addresses or phone numbers	50/50	67/67	40/80	80/80	33/33
Book reviews	50/25	33/33	40/40	60/80	33/33
Help in finding periodicals	100/100	67/100	100/100	80/100	100/100
Factual questions	75/25	67/50	40/40	80/60	67/33
Service by phone	75/100	33/0	40/100	80/80	67/67
Find out if other libraries have	25/100	100/100	40/40	80/100	67/35
Letter or pass to other libraries	50/100	33/67	40/80	60/100	33/67
Borrow materials- Interlib. loan	50/100	33/67	40/100	100/100	0/33
Orientation tours	100/50	100/100	80/0	100/80	67/100

their overall scores on the fifteen questions within question 6 calculated as the total number of correct answers given by members of a group divided by the total number of possible correct answers. A perfect score would involve knowing that twelve of the services are provided and also knowing that the other three are not provided. Table 7 makes it possible to compare the scores of the various groups: the sample as a whole answered 56 percent of the questions correctly, the professional school students and graduate students did slightly better, and the undergraduates did slightly worse. Crude statistical tests showed the undergraduates' score to be significantly lower than that of the rest of the sample, and the professional school students' score to be significantly higher than that of the graduate students. It is curious that the graduate students express more of a desire for most services than the professional students do but are less aware of them. The fourteen people whose addresses changed had a score very close to that of the combined sample; this result gives some confidence that my data may also be representative of those students whom I could not reach. The eighteen people who did not know where the reference desk was had a score of 38 percent, considerably lower than the combined sample's score; ten of these people were undergraduates, four were graduate students, and four were professional students. Noting the surprising number of students in this group, I analyzed the group's composition more closely and found a high percentage of freshmen, graduate students in the sciences, the group with the least experience with the Reg-

TABLE 7

INDIVIDUAL GROUPS' PERCENTAGE
OF "CORRECT ANSWERS"

Complete sample	56%
Professional Schools	63
Graduate students	58
Undergraduates	44
Changed Addresses	58
People who don't know where reference department is	38
Graduate Library School	71
Divinity School	71
Law School	68
Grad. students-Humanities	66
Undergrads.-Sciences	65
Social Service Administration	62
Medical School	61
Business School	57
Grad. students-Social Sciences	55
Grad. students-Sciences	52
Undergrads.-Social Sciences	41
Undergrads.-Humanities	33
Freshmen	33

enstein, and students in their first quarter of study. The

Graduate Library School and the Divinity School scored the

highest with 71 percent correct, followed closely by the Law

School and the graduate students in the humanities; the under-

graduates in the humanities and the freshmen scored the lowest

at 33 percent.

In order to determine whether people who scored high

were simply saying "yes" to every question, I plotted the num-

ber of correct "yes" answers of each respondent as a function

of the number of correct "no" answers in figure 2. It is clear

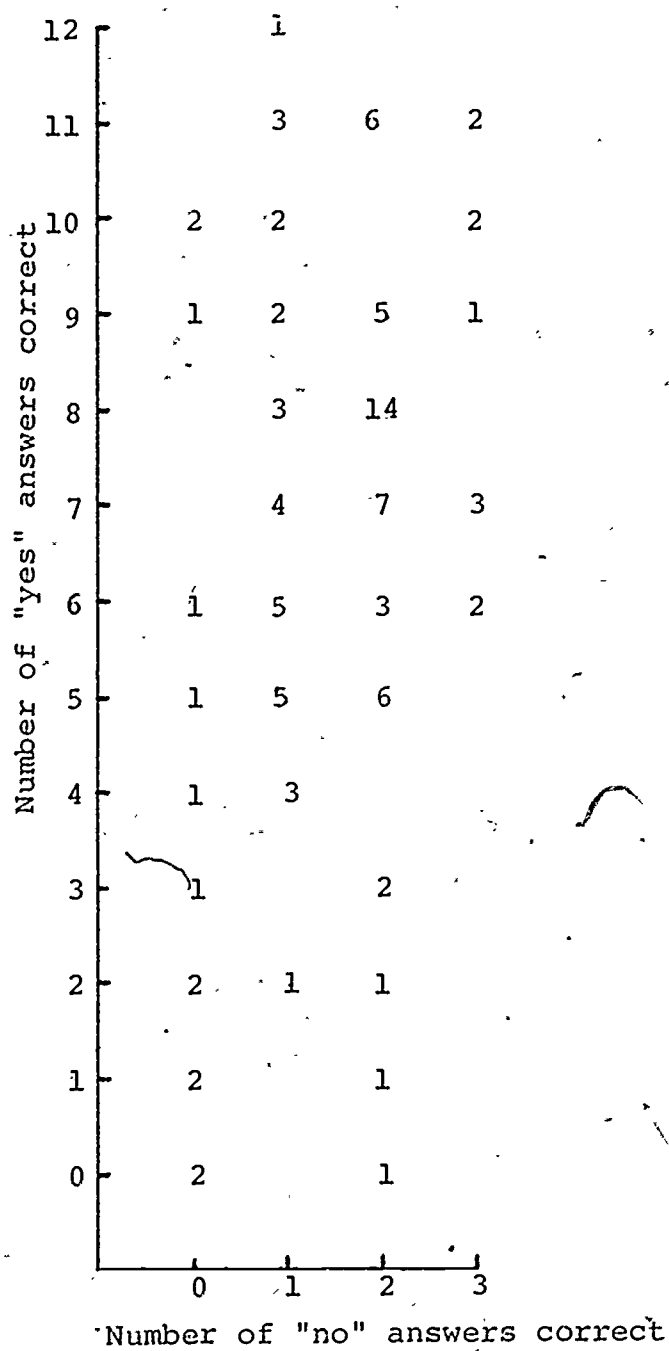that the people who got all or most of the "yes" answers cor-

Fig. 2. Number of correct "yes" answers as a function of number of correct "no" answers.

rect were not simply saying "yes" indiscriminately: there is
no element in the extreme upper left corner of the graph, as
there would be if someone said "yes" to everything. There are,
however, two people who said "not sure" to every question, rep-
resented by the two elements in the extreme lower left corner
of the graph. No one in the sample answered every question
correctly, although one person in a pretest of the interview
did; there are, however, a considerable number of elements near
the upper right corner, indicating people who knew a great deal
about what to expect and what not to expect from the reference
department.

When only the "yes" and "no" answers are examined, to
the exclusion of the "not sure" answers, a different picture
appears. When the respondents actually ventured a definite
answer instead of a "not sure," they were right most of the
time, as table 8 shows.

TABLE 8

PERCENTAGE OF "CORRECT ANSWERS" WHEN
A DEFINITE ANSWER WAS VENTURED

	Correct	Questions answered definitely
Combined sample	91%	62%
Undergraduates	88	50
Graduate students	92	64
Professional school students	91	69

Undergraduates attempted a definite answer less often than the
other groups, and did least well when they did offer a definite
answer, but all groups answered correctly most of the time when

CHAPTER V

DISCUSSION

If it is true that many people do not use the reference department because they do not know that it exists or what its services are, then it might be reasonable for the library to undertake a publicity campaign informing potential users of the assistance available to them and to provide library graphics and informational materials that were prominent, clear, and widely disseminated. This study shows that many people who express a need for various reference services are indeed unaware that such services are available: if everyone who needed existing services knew about them, an already busy staff would be swamped with further demands upon their time, and queueing problems at the reference desk would increase. It would be interesting to see a technical discussion of the effects that the increased numbers implied by the expressed levels of need would have upon the length of lines at the desk and the amount of time a person could expect to have to spend in that line. It should be mentioned here that only students were considered in this study: faculty, staff, and visiting scholars are also an important part of the reference clientele, and I cannot speak definitively about their levels of information or demand.

One answer could be an increase in the size of the

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reference staff, in conjunction with a vigorous program of public information and improved graphics, but this potential solution brings up the ubiquitous problem of limited and shrinking library funding. The need for reference staff would have to be considered in the light of the need for increases in the book and journal budgets, the need for technical services personnel, and the needs of every other department, operation, and program of the library. In a library as large and complex as the Regenstein, public services staff will always be of the utmost importance, but the need for reference staff must be balanced against all of the library's other needs. Although the staff at its present size could serve more people by reducing the quality of service or by dropping some of its present services, I believe that the currently existing services mentioned in this study are all necessary and appropriate functions of a university library reference department; this view is upheld by the number of students who considered the services useful to their work. One measure which could extend the efficiency of a small staff is the use of trained professionals from other departments of the library at the reference desk during particularly busy periods.

It is possible, on the other hand, that increased awareness of reference services will not cause a lasting increase of great proportions in the demand on the services of the staff; as new users learn how to use reference tools and the bibliographic apparatus of the library efficiently, they may become more self-sufficient in library use and consult the reference

staff at a later point in the information-seeking process. New
users of interlibrary loan, for example, take a great deal of
staff time in verifying their requests, filling out initial
forms, etc., but returning users often have learned to do most
of their own verification, saving a considerable amount of
staff time.

The results of this study are important for departments
of the library other than reference; students' complaints about
the way in which periodicals are organized in Regenstein, the
lack of a public periodicals catalog, the organization of gov-
ernment documents, the inadequacy of orientation tours in
teaching efficient library use, and the number and quality of
directional graphics indicate areas of concern beyond the scope
of the reference department. Other universities as well may
benefit from studies of a similar design to investigate student
awareness and use of their information services; this is an
area in need of further evaluation and discussion.

APPENDIX

TABLE 9

INDIVIDUAL GROUPS' FREQUENCY OF REGENSTEIN LIBRARY USE

	Uses per month						
	0-4	5-9	10-14	15-19	20-24	25-29	30 or more
Undergraduates	16	1	4	3	1	0	2
Freshmen	7	0	0	2	0	0	0
Humanities	3	0	0	0	0	0	0
Science	5	0	0	1	1	0	0
Social Science	1	1	4	0	0	0	2
Graduate Students	16	4	3	0	1	4	8
Humanities	1	4	3	0	0	0	4
Science	6	0	0	0	0	0	0
Social Science	9	0	0	0	1	4	4
Professional Schools	17	5	1	4	1	2	5
Business	1	1	1	2	0	0	4
Divinity	2	0	0	1	0	1	0
Law	6	0	0	0	0	0	0
Medicine	3	2	0	0	0	0	0
GLS	1	0	0	1	1	1	1
SSA	4	2	0	0	0	0	0
Changed addresses	5	2	1	0	1	1	4

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TABLE 10

RESPONDENTS IN EACH GROUP USING OTHER LIBRARIES

	No other library	Yes, unspecified	Harper	Eckhart	Chemistry	Billings	Law	SSA	Art	Other
Undergraduates	4	0	16	7	2	0	0	0	0	2
Freshmen	4	0	5	0	0	0	0	0	0	0
Humanities	0	0	2	0	0	0	0	0	0	2
Science	0	0	0	7	2	0	0	0	0	0
Social Science	0	0	8	0	0	0	0	0	0	0
Graduate Students	13	3	12	2	0	1	0	1	2	6
Humanities	5	1	4	0	0	0	0	0	1	2
Science	0	2	0	2	0	1	0	0	0	1
Social Science	8	0	8	0	0	0	0	1	1	3
Professional Schools	8	0	7	2	0	5	6	5	0	3
Business	2	0	6	2	0	0	0	0	0	0
Divinity	3	0	0	0	0	0	0	0	0	1
Law	0	0	0	0	0	0	6	0	0	0
Medicine	0	0	0	0	0	5	0	0	0	0
GLS	2	0	1	0	0	0	0	0	0	2
SSA	1	0	0	0	0	0	0	5	0	0
Changed addresses	3	0	6	0	0	1	3	1	0	0

TABLE 11

INDIVIDUAL GROUPS' ANSWERS TO QUESTION 2

	Is it hard to find the reference desk?			Do you know where it is?	
	Yes	No	No Opinion	Yes	No
Undergraduates	10	7	10	17	10
Freshmen	2	0	7	5	4
Humanities	1	1	1	3	0
Science	4	2	1	4	3
Social Science	3	4	1	5	3
Graduate Students	11	14	11	32	4
Humanities	2	8	2	12	0
Science	3	0	3	2	4
Social Science	6	6	6	18	0
Professional Schools	6	14	15	31	4
Business	2	1	6	8	1
Divinity	0	2	2	4	0
Law	2	0	4	4	2
Medicine	1	2	2	4	1
GLS	1	4	0	5	0
SSA	0	5	1	6	0
Changed addresses	5	5	4	12	2

TABLE 12

INDIVIDUAL GROUPS' ANSWERS TO QUESTION 3

	Ever used reference?		How often last month?						
	Yes	No	0	1	2	3	4	5	6 or more
Undergraduates	11	16	26	1	0	0	0	0	0
Freshmen	2	7	9	0	0	0	0	0	0
Humanities	3	0	3	0	0	0	0	0	0
Science	2	5	6	1	0	0	0	0	0
Social Science	4	4	8	0	0	0	0	0	0
Graduate Students	26	10	25	7	4	0	0	0	0
Humanities	7	5	9	1	1	1	0	0	0
Science	2	4	4	2	0	0	0	0	0
Social Science	17	1	12	4	2	0	0	0	0
Professional Schools	28	7	24	2	5	0	1	2	2
Business	7	2	7	2	0	0	0	0	0
Divinity	4	0	3	0	1	0	0	0	0
Law	2	4	4	0	2	0	0	0	0
Medicine	4	1	5	0	0	0	0	0	0
GLS	5	0	1	0	1	0	0	1	2
SSA	6	0	4	0	0	0	1	1	0
Changed addresses	8	6	9	1	2	0	0	0	2

TABLE 13

INDIVIDUAL GROUPS' ANSWERS TO QUESTION 4

	What does the reference department do?				
	Don't know	Keeps ref. collection	Helps find books, art.	Gives information	Other
Undergraduates	9	10	6	6	1
Freshmen	3	4	2	2	1
Humanities	0	2	1	0	0
Science	2	2	1	2	0
Social Science	4	2	2	2	0
Graduate Students	7	11	15	13	1
Humanities	2	4	6	7	0
Science	2	2	2	0	1
Social Science	3	5	7	6	0
Professional Schools	6	1	25	5	2
Business	2	0	6	1	1
Divinity	1	1	2	0	0
Law	2	0	4	0	1
Medicine	1	0	4	0	0
GLS	0	0	3	4	0
SSA	0	0	6	0	0
Changed addresses	4	4	8	3	0

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