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The Performance of Professionals and Nonprofessionals in the Reference Interview

Twenty-five sets of "indirect" and "faulty information" questions were asked at two university library reference centers, one staffed by nonprofessionals and the other by professionals. The purpose was to determine relative success of professional and nonprofessional reference staff in (1) probing beyond "indirect" questions and (2) detecting and correcting faulty information. Also considered were frequency and success of nonprofessional referrals on unanswered questions.

COMMUNICATION PROBLEMS in traditional reference service seldom have been explored scientifically. There is little doubt in the profession, however, that such problems often result in failure to be of help to patrons and thus create an obstacle to the improvement of reference service.

A difference of opinion exists on the extent and seriousness of communication problems. Some do not accord these problems serious consideration. On the other hand, there is some evidence to indicate that reference personnel may not be aware of the true extent of communication problems due to lack of feedback.[1] If this is true, it is possible that these problems may be more prevalent and more serious than has heretofore been supposed.

In the Rose Bowl game of 1929 stupefied fans watched "Wrong Way Riegals" run sixty-three yards toward the wrong goal line. The well-intentioned reference librarian who fails to determine the patron's information need before proceeding confidently in the wrong direction is equally unfortunate.

One of the greatest difficulties in determining the patron's actual information need comes when that need is hidden under an "indirect" or "faulty information" question. For this reason these types of questions have been chosen as the subject for this study. One observational study in an academic library reports that 25 percent of all questions were "indirect" in some respect and 73 percent of these "indirect" questions were successfully resolved.[2] Cole reports the occurrence of questions which do not represent the actual needs of patrons in academic libraries to be 21 percent.[3] On the basis of these studies we might expect that 20 percent to 25 percent of questions asked in an academic library might not represent patrons' actual information needs.

Granted that such questions do occur to a greater or lesser extent, it must be asked how they are dealt with by reference personnel and with what success. Regrettably, studies of traditional reference service have concentrated on ref-

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erence failure originating in the search process and have, for the most part, ignored failure due to communication problems. The exception is a study by Dorman Smith where an "indirect" question was asked in twenty Boston area libraries. Smith's report indicates that communication in the reference interview is an aspect of service seriously in need of improvement.[4] If reference service failure due to communication problems is to be reduced, it is essential that we know more about how these types of questions affect reference service.

Success in resolving "indirect" and "faulty information" questions also may be influenced by type of personnel used. This has a broader significance in that the use of nonprofessional personnel in reference service is an issue which, when resolved, may well determine the future role of the reference librarian. Thus any data on differential performance of professionals and nonprofessionals should be a useful addition to the literature.

Some documentation on use of nonprofessionals in reference service exists in the literature, but the most significant study of differential ability remains that of Bunge.[5] To the authors' knowledge, no similar study has yet been done comparing the performance of these two groups in the reference interview.

Some of those involved in the controversy over use of nonprofessionals discount or give little thought to the communication process. Others on both sides base their advocacy of certain points of view on unproven hypotheses as to the relative abilities of professionals and nonprofessionals in the reference interview. Thus it is important to investigate these abilities.

Generally, those for or against nonprofessional reference service divide on the following points in regard to communication problems:

1. Should communication problems be the responsibility of the reference librarian?
2. Should they be considered of equal importance to search problems?
3. Do they occur frequently enough to have a detrimental effect on service?
4. Is the expenditure of time and effort involved in solving these problems justified?
5. Can detection and solution of such problems be done more successfully by professionals?
6. Do nonprofessionals frequently fail to make referrals when they are unsuccessful in determining patron needs?

Those holding one point of view tend to answer "yes" to the above questions. Partially for this reason, they advocate all-professional reference service or service where questions are "fielded" by professionals. This point of view is expressed by Wheeler and Goldhor as follows:

> The idea that inquiries should be presented to inexperienced persons and fed upward to those qualified to help is a disservice and inconvenience to readers, partly because the inexperienced do not know where the question should lead.[6]

The opposite viewpoint usually answers some or all of the above questions in the negative and often favors the new concept of the information center where questions are fielded by nonprofessionals who then refer difficult questions to subject specialists who are on call. This viewpoint is expressed by Jestes and Laird who advocate use of technical assistants.

> Professional librarians, although still immediately available to any patron, would be freed from many interruptions and better able to concentrate on collection development. . . .[7]

Balay and Andrew also say,

> It seems likely that paraprofessional assistants could handle these inquiries [information-direction], and could direct other, presumably more difficult, questions to reference librarians.[8]

The specific problems with which this study will be concerned are as follows:

1. What is the relative success rate of professionals and nonprofessionals in resolving "indirect" and "faulty information" questions? What are the reasons for any differences found? What are the implications of this for reference staffing? How can performance of reference staff members be improved in dealing with these questions?
2. How successfully do nonprofessionals make appropriate referrals when they fail to determine patrons' information needs? What are the causes of referral failure and how can such situations, if they exist, be improved?

Method

Two medium-sized midwestern university libraries were selected, both having a centralized reference service. One of these libraries had an information center staffed by nonprofessionals who had access to subject specialists for consultation. The other was staffed at all times by an all-professional reference staff. Seven investigators of both sexes and different ages were used.

Twenty-five different reference interviews were prepared, each consisting of an "indirect" question followed by a "faulty information" question. These questions were taken from the actual reference experience of the second author. "Faulty information" questions were in areas of the social sciences and humanities. Each prepared "set" of two questions was asked of a nonprofessional at the information center library and of a professional at the second library. The procedure was as follows:

All investigators were instructed to begin each interview by appearing moderately confused and making such comments as "I'm new here," "I don't really know what I'm doing," etc. It was felt that these behavioral clues and comments were sufficient to alert reference staff members to the possibility of "indirect" questions.

"Indirect" questions were defined as those where the patrons hide their specific information need and, instead, ask for (1) books on a general subject or (2) a type of source which they think would contain the specific information they seek. Examples of these are (1) "Where are your philosophy books?" (patron wants quote by Aristotle) and (2) "Do you have an index to philosophy?" (patron wants life-styles as related to architecture).

A judgment of success was made if at any time during a five-minute period the reference staff member probed further by asking for more specific information about what the patron wanted. Failure was judged if the reference staff member accepted the "indirect" question as representing the patron's real needs and did not ask further questions about more specific information needs before attempting to terminate the interview or before five minutes had passed.

Directly following this, the investigator then proceeded to ask one of two types of "faulty information" questions of the same staff member. These types of questions were defined as those where the patron presents a specific information need directly but instead gives (1) a misspelling or (2) general faulty information. Examples are (1) Massaponti for Maupassant and (2) the poem "Agnes Eve" by Shelley ("Eve of St. Agnes" by Keats).

Since these questions were considered more difficult, no time limit was set. In

order to increase motivation, investigators commented that finding the information was important to them and resisted mildly the first attempt to terminate the interview if it occurred before fifteen minutes by continuing to stand near the librarian and/or by asking further questions.

A judgment of success was made if the reference staff member detected the faulty information and obtained correct information or showed the patron where correct information could be found before termination of the interview. Failure was judged if the reference staff member terminated the interview without having done this. An exception was made when a reference staff member terminated an interview but continued working on the question and later returned with correct information before the "patron" left the library.

These "faulty information" questions were designed so that in order to obtain correct information each reference staff member had to exercise some or all of the following abilities, skills, and techniques:

1. Detection of possible faulty information
2. Questioning to obtain further key information
3. Asking for written material for purposes of clarification
4. Selecting appropriate reference sources to obtain correct information
5. Using personal knowledge to detect and correct faulty information
6. Referring appropriately when necessary

Interviews were recorded in progress by an unobtrusive investigator nearby and also afterward by the investigator asking the question.

General Results

The results of this study show that the professional librarians in this sample were clearly superior to the nonprofessionals in achieving successful solutions on "faulty information" questions in the reference interview. Table 1 illustrates this.

Professionals personally arrived at the correct solution in the reference interview on 52 percent of questions, while nonprofessionals did so on 20 percent. These results are, to some extent, in line with those of Bunge who found that the speed and efficiency of professionals was slightly but significantly greater than that of nonprofessionals. He found no significant difference, however, in percent of questions answered correctly by the two groups,[9] while this study shows that professionals were more than twice as successful as nonprofessionals in obtaining corrected information. These differences may be due partially to the following:

1. Obtaining corrected information

TABLE 1

Overall Success of Professionals and Nonprofessionals In Correcting Faulty Information in the Reference Interview

Type of Reference Interview	Total Number of Questions	Nonprofessionals Number Correct Solutions	Nonprofessionals Percent Correct olutions	Professionals Number Correct Solutions	Professionals Percent Correct Solutions	Difference with Nonprofessionals
Success in personally obtaining correct information in reference interview (without referral or consultation)	25	5	20	13	52	32 pts.
Success with referral or consultation	25	7	28	15	67	39 pts.

in "faulty information" questions actually may be more difficult than finding answers to moderately difficult factual questions. This could be because the outcome appeared to depend to a much greater extent on personal subject knowledge and to a much lesser extent on skill in use of reference materials.

2. The questions used in this study may have been harder, and greater differences between groups may emerge as questions become harder.
3. Perhaps public library questions, as used by Bunge, are less related to reference sources taught in library school than are academic library questions.
4. Attitude, orientation, role conception, and motivational differences between groups may have been equalized in the controlled test situation where each group was being observed and was attempting to perform at top level. If there are such motivational differences, they would show up more clearly when participants did not know they were being observed.
5. The matching of professionals with nonprofessionals of equal education and experience would tend to erase differences in the typical situation where nonprofessionals tend to have less education and experience.[10] There is some evidence in this study that the performance of nonprofessionals was less consistent, with one performing at a level equal to any professional and another at a level consistently lower than any professional.
6. There may be a greater difference between the performance of the groups in the academic library than in the public library.

"Indirect" Questions

"Broad Subject" Questions

The "broad subject" question is defined as one where the patron hides a specific information need and asks, instead, where the books in a broad subject area are located. On 75 percent of these questions nonprofessionals probed further, while on 91 percent of questions professionals did so. This type of question, as expected, proved to be the

TABLE 2

Success By Type of Question

Type of Question	Example of Question	Total Number of Questions	Nonprofessionals Number of Questions Solved	Nonprofessionals Percent of Questions Solved	Professionals Number of Questions Solved	Professionals Percent of Questions Solved	Difference with Nonprofessionals
Indirect Questions	"Broad Subject" Example: "Where are your literature books?"	11	8	73	10	91	18 pts.
	"Wrong Type of Source" Example: "Where are your almanacs to history?"	10	5	50	9	90	40 pts.
Faulty Information Questions	Misspelling Example: Southy for Southey	12	3	25	9	75	50 pts.
	General faulty information Example: Poem "Agnes Eve" by Shelley	13	2	16	5	38	22 pts.

easiest for both groups of reference staff members to handle.

Performances of professionals and nonprofessionals were similar on this type of question. Examination of the verbatim interviews, however, indicates that the lower success of the nonprofessionals appeared to be due primarily to a concept of their basic role as "teaching about how to use reference materials." Thus they were eager to explain use of catalogs, indexes, and reference books without probing further.

"Wrong Type of Source" Questions

The "wrong type of source" question is defined as that in which the patron hides a specific information need and, instead, asks for a type source such as an "index to philosophy" which he or she assumes (often incorrently) will contain the specific information sought. On 50 percent of these questions nonprofessionals probed further, while on 90 percent professionals did so.

Examination of verbatim interview records also reflected this difference. When faced with a question such as "Do you have any almanacs to literature?" the professional tended to reply immediately and almost routinely, "What type of thing do you want to look up?" while the nonprofessional tended to respond by taking the patron to the catalog to look under the heading "literature—almanacs."

While the form of this question is also generally recognizable, it is considerably more difficult to detect as concealing a hidden information need. This may be because it represents, on the surface, an effective approach to finding information and does not spotlight the patron's obvious lack of library knowledge as does the "broad subject" question. Hidden information needs behind this type of question may have been undetected because of unawareness, perhaps due to lack of feedback, of the extent to which patrons make inappropriate source choices (one study showed 64 percent of such sources could be considered inappropriate).[11]

However, in some cases nonprofessionals appeared to be aware of possible poor source choices but did not probe further. This may have been because they felt there was not sufficient justification for further questioning, that they lacked authority, or that the patron might resent it. They also may have felt that it would not yield anything useful or that it was not their responsibility. Also, by letting such questions pass, one avoids at the same time the difficult interview which is often likely with patrons who make poor source choices, the need to come up with a better source, and possible failure and the resultant need to refer.

"Faulty Information" Questions

On "faulty information" questions (misspelling and general faulty information) about half of the nonprofessionals' failure (as opposed to 15 percent of professionals' failure) occurred in the first step of the process where they failed to question the patron's information and thus did not detect faulty information. This lack of expectation of faulty information on the part of nonprofessionals could be due to lack of orientation, lack of personal knowledge of the subject matter of the question, and lack of feedback from previous experience. Differences between the two groups may have been due to the fact that most library schools encourage responsibility for resolving communication problem questions and provide some orientation and training in handling them.

Familiarity with the subject matter of the questions was judged by staff members' comments during the interview. The professionals' greater personal knowledge of the subject matter of

the questions (43 percent for professionals and 24 for nonprofessionals), perhaps arising from a higher educational level, aided them in recognizing faulty information. Greater experience on the part of the professional librarians also may have been a factor, but there appeared to be some new professionals and some nonprofessionals with a number of years of experience.

The second area of failure came in the next part of the process where, in a number of cases, reference staff members' comments revealed that faulty information was recognized but no attempt was made to obtain correct information. This was the case with nonprofessionals on 25 percent of questions and with professionals on 35 percent. Reasons for nonprofessionals' failure to make an attempt to obtain correct information may have been that they did not feel that it was their responsibility or that they wanted to avoid possible failure or the need for referral.

Another reason for nonprofessional reluctance may have been uncertainty about what sources to use for verification. This is supported by the fact that on misspelling questions which were primarily dependent on use of reference sources for solution, nonprofessionals attempted 33 percent. Professionals, on the other hand, appearing more confident in use of reference sources, attempted 83 percent.

However, on "general faulty information" questions which were primarily dependent upon interviewing rather than use of reference sources for solution, both groups were equally reluctant to attempt the interview. In these cases, when no personal knowledge was present, the success rate of both groups dropped to zero. Professionals frequently showed awareness that something was wrong but were singularly reluctant to interview, asking only a few perfunctory questions. Clues were given by the "patron" but were not followed up. This reluctance to attempt the difficult interview on questions where reference sources could not easily be consulted was a major source of professional failure.

In addition to previous reasons, nonprofessionals may have been reluctant because they felt a lack of authority to probe further. Both groups may have felt the patron would resent their probing further. They also may have been motivated by a desire to avoid the difficult interview by not being clear on the nature of the problem and therefore not knowing what to ask and by the feeling that further interviewing would not reveal anything significant.

In addition to these reasons, professionals appeared to be reluctant due to lack of time (they often worked alone), though there were some cases where the difficult interview was not attempted even though no other patrons were in sight. The strongest possibility, however, appeared to be that, probably due to constraints of the pressure of business in general, professionals had developed the habit or policy of pursuing questions only up to a certain point—that point at which they could turn to a reference source for solution —and stopping short when the only recourse was a difficult interview where prospects of success seemed low. These results are in line with those of Dorman Smith.[12]

When attempts to obtain correct information were made (by using personal knowledge or by consultation of sources), they were successful 20 percent of the time for nonprofessionals and 83 percent of the time for professionals. Failure on the part of the nonprofessionals appeared to be due primarily to failure to select the right source for verification. Professionals more frequently selected the right source but failed, due to pressure of

business, to take sufficient time to examine it carefully.

One professional librarian twice selected the correct reference source but overlooked answers directly under her eyes, due to being in too great a hurry. In another case, she obtained the key information from the patron but did not take sufficient time to examine it. Here again, the greater ability of professionals to select the correct source could be due to library school training and possibly to greater experience. Lack of time to interview and to consult sources appeared to be another major cause of professional failure.

Personal Subject Knowledge

An additional reason for nonprofessional failure to perform as well as professionals appeared to be lesser personal knowledge of the subject matter of the question, which handicapped them in recognizing faulty information and in knowing where and how to correct it.

The professionals were superior in amount of personal subject knowledge, demonstrating familiarity with the subject matter of 45 percent of questions, while nonprofessionals demonstrated familiarity with 24 percent. This lesser knowledge of the subject matter of questions on the part of nonprofessionals may be due, in part, to lesser education and perhaps to lesser experience.

There is clear indication that knowledge of reference sources alone, while shown here to be important, was not sufficient for adequate performance on these types of questions. The professional librarians in this study appeared to have superior knowledge of reference materials; but on those questions where they had no personal subject knowledge, they achieved a success rate of only 31 percent. On the other hand, nonprofessionals who appeared to have less knowledge of reference materials had a success score of 80 percent on questions where they had personal knowledge. Personal knowledge also appeared to determine failure in the case of nonprofessionals who failed on 100 percent of questions where they had no personal knowledge. Professionals, however, were successful on 31 percent of questions where they had no personal knowledge, due perhaps to greater knowledge of reference sources.

The way in which personal knowledge aided both groups of staff members was as follows:

1. Misinformation was often detected immediately, saving the verification process.
2. It helped suggest possible solutions, as when the librarian identified Massaponti as Maupassant, being aware that the latter was well known, widely read, and likely to be asked for.
3. If verification was still needed, it helped to selecting the best sources. On a question concerning the Masada, for example, the librarian knew it was famous enough to be verified in the encyclopedia under "Jews—History."
4. It saved the librarian from proceeding on a false course. For example, because of personal knowledge, the librarian was not misled when told Tini Kling was a game.

These findings suggest that lack of personal knowledge is a great handicap when dealing with "faulty information" questions.

The Consultation and Referral Process

A significant reason for differential performance was nonprofessional failure to utilize referral and consultation to the fullest. The concept of the information center, staffed by nonprofessionals, but backed up by professional reference librarians who are available for consultation, is partially based on the premise that the less experienced personnel will refer whenever they fail

to find the answer to a question.

This study demonstrated that, in the case of "faulty information" questions, this premise is questionable. Out of twenty-one questions which nonprofessionals failed to answer, only six were referred—five to professional librarians and one by consultation with another nonprofessional. Thus the nonprofessionals referred or consulted on only 28 percent of those questions they were unable to answer. Of those referrals or consultations, two, or 33 percent, were successfully resolved.

On the six questions referred or consulted on, the following problems occurred:

1. The subject specialist was busy.
2. The subject specialist was not there.
3. The patron was referred to the wrong subject specialist.
4. The nonprofessional called the professional on the phone, but even though the professional knew the answer, due to a failure in communication, the patron did not get the information.
5. The nonprofessional repeated the patron's misleading information to the professional, who accepted it at face value and failed to reconduct the interview.
6. The nonprofessional distorted the information slightly in transmission.

On eight unreferred cases, the nonprofessionals apparently did not refer because they did not detect the faulty information. On another three, they detected the faulty information but did not appear to know how to verify it. On another four, where lacking information rather than misinformation was the problem, they apparently did not refer because they did not realize that by using more in-depth interview techniques they could have obtained the key information.

Basically, it appeared that they failed to refer because (1) they did not detect the faulty information, or (2) they believed they had done all that could be done and that the professional librarian could not add anything to the answer. This is reinforced by the comment of one nonprofessional as she terminated the interview, "I'm sorry, there is just no approach to this problem."

They also may have failed to refer because they considered the question unimportant, because they did not wish to disturb the professional librarian, or because they felt too many referrals might reflect on their capability. It also appeared that the nonprofessional seldom referred unless the professional librarian was in the vicinity. In both cases where nonprofessionals made successful referrals or consultations, the individual referred to was in the immediate vicinity.

Professional referrals (two referrals and one consultation) were more successful (67 percent) than those of nonprofessionals (33 percent). The professional librarians, however, did not consult with each other as much as might have been expected. In three cases, the librarian was on duty alone (and in the others, the faulty information was not detected). The success score of both groups undoubtedly would have been greatly increased by more frequent consultation.

The failure of the referral and consultation process in the information center setting suggests that if communication problem questions are considered important, re-evaluation should be made of the information center concept. It also suggests the possibility that similar types and numbers of referral failures may occur on straightforward questions.

Conclusions

In assessing the results of this study it is important to remember that it was not designed to evaluate the potential of reference personnel without library

degrees. Instead, it was designed to compare the performances of the two groups under ordinary day-to-day conditions, "as it is," rather than "as it could be" at its best.

The results of this study in regard to "indirect" questions indicate that professionals performed adequately on both types of "indirect" questions (91 percent and 90 percent). Nonprofessionals performed adequately on "broad subject" questions (73 percent) but failed to perform adequately on "wrong type of source" questions (50 percent).

In regard to "faulty information" questions (misspelling and general faulty information), nonprofessionals did not perform adequately (28 percent success with referral or consultation). The success of professional librarians (67 percent with referral or consultation), while perhaps adequate, also is below what we would hope for in provision of top quality service.

In addition to lack of orientation, the lower performance of nonprofessionals appeared to be primarily due to lesser personal knowledge of the subject matter of the questions (perhaps, in turn, due to lesser education and/or experience) and lesser knowledge of reference materials. Professional failures appeared to be due, on the other hand, to reluctance to attempt the question which depended primarily on the difficult interview for solution and to lack of time to conduct proper interviews and examine reference sources to obtain correct information.

Thus one effective program, in terms of successful resolution of communication problem questions, would be that where interviewing is done by professional reference librarians who then refer easier questions to nonprofessional assistants. Assuming that departmental policy encouraged responsibility for communication problem questions and that professionals were properly motivated and trained to deal with these questions, this type of arrangement might result in increased time for interviewing and locating correct information.

If this way is not utilized, other ways of improving service on communication problem questions suggested by this study are as follows:

1. Orientation and training in handling communication problem questions should be given, including training in techniques for gaining information in the reference interview.
2. Personnel should be encouraged to develop a sense of responsibility and concern for communication problem questions and should take pride in their successful solution.
3. In-service education should be provided and encouraged, aimed at increasing subject knowledge and knowledge of reference sources.
4. Selection of nonprofessional personnel for reference should be made both on the basis of high educational level and library science courses.

In regard to referral and consultation, this study suggests the following:

1. Professional personnel should be available in the immediate area at times that reference service is provided.
2. Referral and answering of questions by phone should be avoided. In cases where this is necessary the nonprofessional should not transmit the patron's information but should allow the professional to reconduct the interview over the phone.
3. The person to whom the question is referred should reconduct the interview, though taking pains to be brief and tactful.
4. A policy should be established to

refer all questions for which answers cannot be found or for which no approach to the problem can be discovered.

5. Personnel should avoid judging the boundaries of others' knowledge by their own boundaries. Thus, instead of concluding "There is just no approach to this problem," the conclusion should be "I can think of no approach to this problem, but it is possible someone else could."
6. Frequent referrals should be encouraged and rewarded as resulting from high standards and concern with good service. The attitude should be discouraged that referrals are an annoyance and reflect lack of competency and failure.

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