Reference Classification—Is It Time to Make Some Changes?

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In 2005, the authors tested the consistency and ease of use of a skill and strategy–based reference question classification system published by Warner in 2001. Results of that test indicated that the Warner system was a significant improvement over the traditional resource-based system. In this study, reference librarians from other institutions were invited to compare the technology-sensitive Warner system to the traditional Katz classification system. The results of this larger test mirror the findings of the original study. Overall, classification was more consistent using the Warner system.

Libraries of all types depend upon use statistics for planning and managing reference services and for assessing the value and usefulness of the library's collection. Historically, reference statistics have been troublesome to collect because of the qualitative nature of questions and the difficulties in assigning a wide variety of these questions into a minimal number of strict categories. The classification of questions must be distinguishable and consistent if librarians are going to be able to use the results effectively for planning and evaluation.

Online resources and new technologies have altered the types of questions received at library reference desks, leading some institutions to reconsider the classification systems used to document reference service. During selected periods from 2004 to 2005, the authors recorded every question they received while they were staffing the reference desk of a small academic library. The questions were classified two ways—using both the traditional method described by Katz and a new classification method proposed by Warner.[1] The results were compared for ease of use and consistency in classification. The Warner method worked better at the authors' institution and was incorporated by all reference librarians beginning in July 2006.[2] The authors performed the 2005 study, like many studies reported in the literature, at their home organization. They sought to test those results by conducting a similar comparison using participants from multiple organizations.

LITERATURE REVIEW

Classification and analysis of reference questions has intrigued librarians for years. As early as 1951, Lawrence Thompson encouraged colleagues to evaluate existing categories for their usefulness and to construct new classifications as needed.[3] During the mid-1960s, the American Library Association (ALA) and the National Center for Educational Statistics cosponsored a

national conference aimed at standardizing library statistics.[4] Later studies examined reference question classifications aimed at improving collections, refining staffing needs, or analyzing chat reference services.[5] The evaluation of the Reference and User Services Committee of RUSA's Reference Services Section (RSS) provides a detailed bibliography of articles that traces the evolution of reference service and evaluation.[6] It is unlikely that the collection of statistics relating to reference service activities will ever be completely uniform among all libraries. However, reference librarians and their administrators will continue to collect and compare these data. What, then, can be done to improve the methods that are currently used?

Literature evaluating various types of reference desk activity as well as electronic reference (e.g., chat, e-mail, and instant messaging) abounds.[7] As part of the evaluation of the overall effectiveness of these services, authors have also tried to categorize the nature of the questions received. Katz described traditional reference-question categories in detail as directional, ready reference, specific-search questions, and research.[8] In 2001, Warner suggested a new classification system for reference questions that includes skill-based and technology-related categories (defined as nonresource-based, skill-based, strategy-based, and consultation).[9] Her institution, a health sciences library, was undergoing a physical redesign and consolidation of the circulation and reference service desks and, concurrently, was assessing staffing and collection needs. Reference librarians at Carnegie Mellon have also created their own classification study to address this issue.[10] Their six-point READ Scale bears some resemblance to Warner's classification; it includes effort and time along with a skill-based assessment and allows for higher levels of classification for research assistance that is conducted beyond the reference desk.

Several studies note that the consistency of classification is also an issue of concern.[11] Do librarians interpret the defined categories in a uniform manner? Two reference librarians might perceive the same question differently, leading them to classify it in different categories, particularly if the categories are not clearly defined. National reporting agencies and organizations continue to collect reference transactions as part of their multi-institution statistical reports.[12] Yet, if librarians within institutions have difficulties with consistency, how can cross-institutional statistical comparisons be expected to provide meaningful information?

METHOD

The University of South Florida St. Petersburg (USFSP) is a small public institution serving approximately five thousand students and offering both undergraduate and graduate degrees. The library has a staff of seven professionals (MLS) who staff the reference desk for seventy-three hours a week, including evenings and weekends. After an extensive analysis of questions received at the desk in 2004 and 2005, the authors presented the Warner system to the entire reference staff of the USFSP Poynter Library as a means of providing a more accurate portrayal of reference activity.[13]

The authors wanted to verify that the new method is truly easier to use and provides a more consistent means of classification from one librarian to another. Testing of the Warner system for this study was performed in two stages. The authors recorded every reference desk interaction they performed while on desk duty during the spring 2007 semester. As they recorded each question, they coded it with the Warner classification that seemed to be the best fit. Librarians must record reference statistics quickly so that they may assist other patrons, so an intuitive system is essential. Therefore the authors made every attempt not to overanalyze each question; the Warner classification that came to mind immediately was recorded, and no attempt was made to see whether it corresponded to previous choices for similar interactions.

At the end of the semester, each author transferred her list of questions with their accompanying classification codes to a Microsoft Excel spreadsheet, and then hid the coded column. The authors then exchanged spreadsheets and proceeded to classify each other's questions without seeing the original code assignments. Finally, the spreadsheets were combined and the two sets of codes compared for discrepancies—both for consistency of the original coder and for variation between coders. The intent of this portion of the study was to determine whether librarians who are very familiar with the Warner process would find the coding to be easier and more consistent.

The second part of the study involved a comparison of the Warner and traditional categories using a survey that was distributed on three library discussion lists. The survey was approved by the Institutional Review Board (IRB) at the University of South Florida prior to its dissemination. The LIBREF-L and PUBLIB discussion lists were selected as the main means of dissemination because they are both lists frequented by reference librarians and aimed at a national and even international audience. LIBREF-L counts more than two thousand reference librarians as subscribers.[14] Although subscription figures were not available for PUBLIB, it is known to be a popular list reaching a large number of librarians. It should be noted, however, that PUBLIB does not limit content to reference issues. The survey was also posted on the Florida Library Association discussion list (more than eleven hundred subscribers) in an effort to reach additional reference staff at all types of libraries.[15]

Participants in the survey were asked to classify forty questions: twenty questions using the traditional reference categories defined by Katz and twenty questions using the Warner system (see the appendix for a list of the survey questions). After a brief explanation of the coding systems, the authors asked the participants to code each question into one of four categories as described previously. Participants also received options for "I am unable to place this into a category" and "I would not record this as a reference question." The questions covered a broad range of reference interactions. Although no two questions were alike, matching questions appeared in both sections

of the survey to allow for comparisons between the two systems. For example, both the Katz and the Warner sections of the survey included questions requiring a basic library catalog search, a question for help with specialized software, a complex research question, and so forth.

The survey was posted for one month (April 2–May 1, 2007), and survey responses went to an anonymous mailbox. The authors coded the responses into a Microsoft Access database to allow for easy analysis. Although there is no one "correct" answer for any specific question, because of the subjective nature of reference questions overall, this study hoped to determine if users could employ one of these systems with greater consistency than the other. The authors used a Mann-Whitney U test to analyze the answers of participants to compare the overall consistency rates of the Katz and Warner systems.

RESULTS

During the spring 2007 semester, 1,473 reference desk interactions were received and recorded by the authors. When the codes were compared, the authors had a 13 percent (189 of 1,473) discrepancy rate in their assignments. This is an improvement over the 18 percent discrepancy rate previously reported in the authors' first evaluation of the Warner system.[16] This may indicate that consistency improves as librarians become more familiar with the system. Some discrepancy between coders is not unexpected because of the difficulty of interpreting the full intent and scope of the question months later by someone who was not part of the original reference interaction. Reference staffers also come to the desk with different specialties and levels of experience that may bias their classification of queries.

To analyze the internal consistency of a librarian from one day to another, the interactions were examined to see how many times a similar type of question was classified differently by the same person. For example, how often did the same librarian record a skill-based question on one day but record a similar query as a strategy-based question another day. Results showed that both authors were internally consistent approximately 90 percent of the time. Some of the discrepancy may be related to difficulties using the classification system or simple errors made while coding. But, as stated previously, interpretation of the difficulty or ease of a question is very subjective, depending on a variety of factors during the reference interview.

The second part of the study looked at consistency and ease of use for librarians who may not be as familiar with the Warner system. During the month that the survey was active, the authors received 153 usable responses, which was considerably more than the hoped-for response size suggested (50–100 responses) in the original IRB application. Studies using Web-based surveys face limitations relating to sample size and population representation. Although there was potential for literally thousands of responses using the professional lists to deliver invitations, there was no way to predict or guarantee what the actual participation rate would be, and actual response rates could not be calculated. The authors used in this study several of the recommendations for improving Web survey samplings that are suggested by Kaye and Johnson.[17] This included limiting the survey announcement to a few, library-focused discussion lists that would be expected to reach the desired population for the study. The survey was also available for a limited amount of time, helping to restrict the responses to the initial population group. Finally, the researchers requested basic demographic data to help the researchers have some idea of how well the responses represented the actual population. As a first attempt to test the new system outside of the authors' home institution, the Web survey instrument was one way to reach a much broader audience than would otherwise be possible locally. Hopefully, a study such as this will also encourage others to further test the new classification system within their home environments.

The survey invited respondents to indicate their age, years of professional experience, and type of institution where they worked (see tables 1 and 2 for demographic details). Allowing for the differences in the age groupings reported, general distribution of the participants by age in this study is similar to the 2000 Census estimates reported by ALA and the broad age characteristics reported in ALA's September 2006 membership survey.[18] Parallels can also be made to Wilder's demographics published in 1995 and a newer study by Fox, who studied Canadian academic librarians.[19] The high number of respondents in their fifties may be related to the much discussed "graying" of the library profession, or it may be simply that librarians in that age group are more likely to respond to surveys. The respondents' reference experience was relatively evenly distributed, as shown in table 2. The respondents were nearly equally divided by institution type as well, with 53 percent (80 of 151 respondents to the demographic questions) from public libraries and 46 percent (69 of 151) from academic institutions.

Table 1. Age (*n* = 151)

Age	Number
24 and under	1 (1%)
25-29	15 (10%)
30-39	29 (19%)
40-49	27 (18%)
50-59	60 (40%)
60-69	14 (9%)
Over 70	5 (3%)

Table 2. Years of Reference Experience (*n* = 151)

Years of Experience	Number
0–2	20 (13%)
2–5	28 (18.5%)
6–10	34 (22.5%)
11–20	32 (21%)
More than 20	37 (25%)

Reference questions are often subjective, and categorization may be dependent on nuances of the question known only to the reference librarian at the time the question is asked. Several of the respondents commented on the difficulties in classifying questions that were simply listed on a piece of paper without the give-and-take that normally takes place within a typical reference interaction. Desai has also discussed the difficulty inherent in classifying questions, since many basic questions are actually precursors to more in-depth research or instruction.[20] In addition, different people may rank the difficulty of a question as harder or easier because what might seem complex and require a research consultation for one librarian could be a relatively easy, mid-level reference question for another librarian with more experience in reference, a more comprehensive collection to consult, or more expertise in that particular subject specialty. This difference in ranking may particularly affect the categorization of the more complex reference questions (Katz's "specific search" and "research" questions and Warner's "search strategy" and "consultation" questions). Tables 3 and 4 contain the actual number of answers received for each question. The most common category selected is underlined.

In some cases, however, a clear preference did not emerge, indicating a greater degree of disagreement or confusion on how to classify certain types of questions. When 153 people answered 20 questions (3,060 total answers), 5.5 percent (169) of the time participants chose the "unable to place" option using the Katz system. Particular difficulties were noted with the questions relating to remote or wireless access, help using library machines, specialty software, or reports of security problems. The Warner system fared better, with 1 percent (30 of 3,060) of the Warner questions assigned to the "unable to place" option; the security question caused the most variability with this system. Although these percentages seem small, the authors applied Pearson's chi-square test to the data to check for a significant difference. The null hypothesis assumes there is no association between the classification systems and the ability to place a question in one of the classification categories. The alternative hypothesis is that there is an association between the system and the ability to place a question in a category. The chi-square results—x^2 (1) = 100.35, $p < 0.001$—rejects the null hypothesis, indicating that there is significantly less difficulty selecting a category using the Warner system than the Katz.

Some questions were much easier to classify (i.e., showed greater consistency between participants), particularly in the Warner system. Table 5 compares the consistency in classification using the two systems.

For nine of the twenty questions classified using Warner's system, the 153 participants agreed on the category 70 percent of the time or better. For six of the remaining questions, respondents' consistency was between 60 and 69 percent. There were only two questions where agreement was less than 50 percent. However, using the Katz system, agreement surpassed 70 percent in only two questions, while consensus on twelve of the remaining questions varied considerably (between 30 and 59 percent). Since the Katz system was created prior to the advent of the Internet, it is not surprising that respondents found it particularly difficult to categorize questions relating to technology assistance. Aside from questions confirming the availability of specific equipment (technology availability category, table 5), for five questions in the technology area, agreement only ranged between 29 and 41 percent. The greatest apparent variation in both systems related to the questions dealing with complex searching and basic or advanced OPAC searching. Again, the discrepancies here may be related to perceived difficulties based on expertise, experience, and availability of collections.

There may always be a dilemma regarding what type of interactions should be counted. In this study, for the question about borrowing supplies, 61 percent (93 of 153) of the participants using the Warner system marked this as a nonresource-based question. However, when using the Katz system, the most common reply (46 percent, or 70 of 153) was that the question should not be recorded at all. Similarly, for the question about security problems, the most common response in the Katz system was that the question should not be recorded (62 percent, or 95 of 153). A total of 45 percent of participants using the Warner system placed the security question into the nonresource-based category (69 of 153). Nearly as many respondents using the Warner system decided that the security question should not be recorded (44 percent, or 67 of 153).

In a graphical representation of the responses using each system (figure 1), there appears to be greater agreement using the Warner classifications. To verify this, the authors used the Mann-Whitney U test to compare the overall consistency rates of the Katz and Warner systems. The null hypothesis is that librarians will employ both systems in an equally consistent manner. The alternate hypothesis is that librarians will not employ both systems in an equally consistent manner. The result of the analysis shows that the null hypothesis must be rejected and the alternate hypothesis is accepted ($U = 96.500$, $N_K = 20$, $N_W = 20$, $p = .005$, two tailed). This test result further supports the apparent benefit of consistency when using the Warner classifications.

The authors also used the Mann-Whitney U test to determine if either the public or the academic reference staff used one system more consistently than the other. Analysis of the responses from the public staff indicates a significant difference in consistency when using Katz versus the Warner systems ($U = 97.0$, $N_K = 20$, $N_W = 20$, $p = .005$, two tailed), with Warner being the most consistent. Academic reference librarians also demonstrated a significantly higher consistency ($U = 94.0$, $N_K = 20$, $N_W = 20$, $p = .004$, two tailed) with the Warner system. As another check of the general consistency, the authors evaluated each system separately using institution type as the dependent variable (public Katz to academic Katz and public Warner to academic Warner). In those cases, there does not appear to be any significant difference in the consis-

Table 3. Overall Responses to Katz Section of the Survey* (*n* = 153)

	Category						
Question	**Directional**	**Ready Reference**	**Specific Search**	**Research**	**I am unable to place this into a category**	**I would not record this as a reference question**	**No Answer**
May I use your stapler? (Borrow supplies)	69	4	0	0	7	70	3
How do I cite a government document in APA style? (Citation style)	2	97	37	12	2	1	2
I need articles about innocent people who were wrongly given the death penalty. (Complex search)	1	0	62	88	1	0	1
Do you have the *Wall Street Journal* for January of this year? (Current periodicals)	30	89	29	0	3	1	1
How do I renew my books? (Explain library services)	73	43	5	0	10	21	1
I need help using the microfilm reader. (Help-machinery)	62	23	6	5	26	30	1
How do I change my margins in a Word document? (Help-software)	30	45	25	5	23	23	2
How late is the fitness center open today? (Nonlibrary-general information)	51	75	7	1	5	13	1
How do I use the computer to register for a course or workshop? (Nonlibrary-Internet access)	38	45	22	3	21	21	3
I need the section where I would find information on the economy of France. (OPAC search-advanced)	16	23	88	24	0	1	1
Do you own the book titled *Broken Trust*? (OPAC search-basic)	11	95	42	1	1	3	0
Do you have one of the blue sheets that talk about business resources? (Prepared handout, flyer, etc.)	48	75	16	4	5	5	0
I'm trying to access FirstSearch from home and it's asking me for a password. What am I doing wrong? (Remote access)	40	51	23	5	21	12	1
There is a strange person bothering me on the second floor—can you help? (Security problem)	24	8	4	2	18	95	2
Do you know how Joan of Arc was executed? (Short answer)	1	86	49	15	2	0	0
I need books and articles about censorship. (Subject search-advanced)	0	7	90	51	1	0	4
I need to find critical analyses of books by Alice Walker. (Subject search-basic)	0	9	113	31	0	0	0
Do you have laptop computers available for checkout? (Technology-availability)	101	15	1	0	5	31	0
How do I access the wireless network? (Technology-instruction)	59	41	10	4	18	19	2
Where do I find call number 811.54? (Where is call number . . .)	129	20	3	0	0	0	1

*Underlined responses indicate the most common category selected for each question. Consult the appendix for descriptions and examples of the Katz categories.

Table 4. Overall Responses to Warner Section of the Survey* (*n* = 153)

Question	Category						
	Non-resource based	Skill based	Strategy based	Consultation	I am unable to place this into a category	I would not record this as a reference question	No Answer
May I borrow a pencil? (Borrow supplies)	93	0	1	0	3	52	4
How do I cite a webpage in MLA style? (Citation style)	7	95	42	7	0	0	2
I need information on how religion has affected children's literature. (Complex search)	1	5	60	83	1	0	3
Do you have the latest issue of the journal *Contemporary Psychology*? (Current periodicals)	36	84	26	1	3	1	2
How do I get a book from another library? (Explain library services)	51	89	6	3	1	0	3
Can you show me how to reduce on the copier? (Help-machinery)	33	103	1	1	2	11	2
How do I print multiple PowerPoint slides on one page? (Help-software)	4	144	0	1	0	1	3
Is the computer center open on Sundays? (Nonlibrary-general information)	144	0	1	0	1	6	1
How do I use the computer to check my property taxes? (Nonlibrary-Internet access)	8	93	41	6	0	1	4
I need the section of the library where I can find books on Greek mythology. (OPAC search-advanced)	24	60	64	2	0	0	3
Do you have any books by Fannie Flagg? (OPAC search-basic)	8	92	45	3	3	0	2
Do you have that orange piece of paper that lists educational websites on it? (Prepared handout, flyer, etc.)	126	14	4	2	3	2	2
How do I access full-text articles from home? (Remote access)	10	118	15	7	0	0	3
My things are missing from the third floor (possible theft). (Security problem)	69	2	1	1	10	67	3
I need a recipe for sweet potato casserole. (Short answer)	3	36	108	3	0	0	3
I need books and articles about religious traditions in Africa. (Subject search-advanced)	1	6	111	33	0	0	2
Where can I find critiques of Shakespeare's *Hamlet*? (Subject search-basic)	4	24	112	9	0	0	4
Do you have a scanner I can use? (Technology-availability)	115	13	1	0	2	19	3
How do I connect my laptop to the library computer network? (Technology-instruction)	19	122	1	1	0	5	5
Where do I find call number PR? (Where is call number . . .)	103	43	2	1	1	0	3

*Underlined responses indicate the most common category selected for each question. Consult the appendix for descriptions and examples of the Warner categories.

Table 5: Comparison of most common category selected by type of question: Katz vs. Warner (n=153)

	Katz			Warner		
Question type	**Highest number of responses**	**% of total responses**	**Category description**	**Highest number of responses**	**% of total responses**	**Category description**
Borrow supplies	70	46	Would not record	93	61	Nonresource-based
Citation style	97	63	Ready reference	95	62	Skill-based
Complex search	88	58	Research	83	54	Consultation
Current periodicals	89	58	Ready reference	84	55	Skill-based
Explain library services	73	48	Directional	89	58	Skill-based
Help (machinery)	62	41	Directional	103	67	Skill-based
Help (software)	45	29	Ready reference	144	94	Skill based
Non-library (general information)	75	49	Ready reference	144	94	Non-resource based
Non-library (Internet access)	45	29	Ready reference	93	61	Skill-based
OPAC search (advanced)	88	58	Specific Search	64	42	Strategy-based
OPAC search (basic)	95	62	Ready reference	92	60	Skill-based
Prepared handout, flyer, etc.	75	49	Ready reference	126	82	Nonresource-based
Remote access	51	33	Ready reference	118	77	Skill-based
Security problem	95	62	Would not record	69	45	Nonresource-based
Short answer	86	56	Ready reference	108	71	Strategy-based
Subject search (advanced)	90	59	Specific search	111	73	Strategy-based
Subject search (basic)	113	74	Specific search	112	73	Strategy-based
Technology (availability)	101	66	Directional	115	75	Nonresource-based
Technology (instruction)	59	39	Directional	122	80	Skill-based
Where is call number . . .	129	84	Directional	103	67	Nonresource-based

tency rates of public librarians and academic librarians using same system.

Analyses of participants' responses based on age or years of experience were more tenuous. The authors applied a Mann Whitney U test to each age or experience grouping, and there were indications that the Warner system may be more consistently used by most groups. However, any real statistical inference would be suspect as the sample size of each of the five levels of experience and five age groups was quite small. Additional research with larger sample sizes would be required to draw more definitive conclusions.

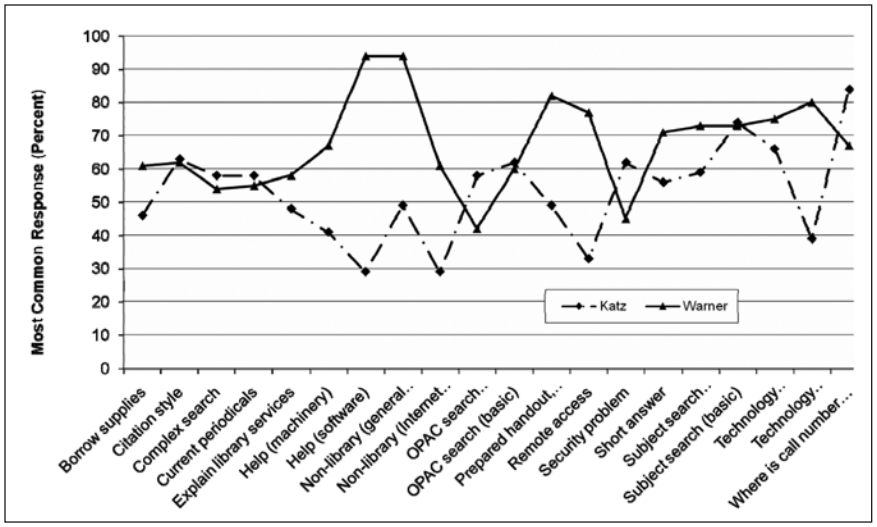
The open comments provided some final insights. Several respondents to this survey expressed frustration over their current process for collecting reference statistics, some to the point of wanting to give up on the whole idea of recording transactions. Yet obviously some kind of assessment is needed for staffing and evaluative purposes. This survey presented no clear-cut preference for either Katz's traditional scheme or the Warner system. Some respondents noted that they preferred the Warner system, but others found it confusing. Others stated that they didn't care for either system or that they had no preference.

DISCUSSION

Based on the results here, the Warner system showed some strength over the Katz system. The 13 percent disparity rate (this study) and the 18 percent disparity rate (the first study) found in the in-house analyses are a big improvement over the 45 percent disparity rate noted by Kesselman and Watstein in their 1987 examination of their in-house system.[21] Gerlich and Berard also found a higher number of discrepancies in categorizing the more subjective questions. In their test, librarians were nearly unanimous in their classification of questions in their categories 1, 2, and 6, which related to directional assistance, help with machinery, policy information or, at the other end of the scale, questions that required a high degree of expertise. Classification in their 3, 4, and 5 categories, which included more involved searching techniques, complex technical assistance, and so forth, showed more discrepancies.[22] The current study had similar findings, with the authors showing strong consistencies in the directional and general-information questions but greater levels of difference in ranking questions that required the use of the online catalog or library databases.

Previous studies have shown that reference transactions, as defined by RUSA and other national reporting organizations, may account for only 8–12 percent of the queries asked at a reference desk.[23] RUSA RSS's Evaluation of Reference and User Services Committee has been working for several years on new guidelines for assessing services.[24] Studies such as this reinforce that need. In January 2008, RUSA approved a new definition for reference that clearly states that a reference transaction does not include "assistance with locations,

Figure 1. Graphical comparison of most common category selected by type of question



schedules, equipment, supplies, or policy statements."[25] While this clarifies the more research-oriented transactions, it still does not provide a method to account for the vast amount of time that many reference librarians are required to spend on sometimes complex technical queries or directional assistance. There are numerous studies and reference-list discussions that illustrate that many librarians are still grappling with meaningful ways to measure and justify the time-consuming technical expertise expected of many librarians.[26]

This study confirms that classifications using the traditional Katz system were consistent for time-honored reference assistance, such as basic OPAC searches, subject searches, and directions to call number areas. These categories are well defined in the Katz system, and most librarians are used to categorizing questions relating to basic information, reference, and instruction. The Warner system was stronger in the technology-related questions, which is not surprising as this is an area that was specifically addressed by Warner, and, as previously noted, the Katz system was created prior to major advances in information technology.

This survey revealed another interesting aspect of reference classification. As indicated by the responses and the comments, it is obvious that librarians do not always agree on what should be counted as a reference transaction. Some libraries consider any interaction with a librarian, no matter how inconsequential, to be worthy of recording. Others feel that only questions directly related to the library or the librarian's expertise should be recorded. Both arguments are justifiable, depending on the intended use of the statistics, particularly if the statistics are being used to determine staffing levels. Recording every person-to-person interaction could be useful to get a feel for the service value that might be missed if a library staff person had not been available to provide supplies or help with nonlibrary-related concerns. The Sumsion, Marriott, and Pickering study illustrates this disagreement between librarians over what should be counted as a reference inquiry.[27]

Although the survey design purposely did not match similar questions in each section of the questionnaire, the Katz ratings always preceded the Warner ratings. This may have unintentionally biased some respondents by cuing them into what types of questions would follow and allowing them time to rethink how they might want to respond to later questions.[28] It is possible that the "part-part consistency effects" described by Schuman and Presser apply to this study.[29] Additional research is required to analyze potential question-order effects on the results discussed here.

CONCLUSIONS

For years, with minimal direction, libraries have recorded and submitted their reference transactions counts to the national reporting agencies. This simplistic reporting may ensure some level of consistency with its either/or basis, but there are no major studies confirming how and what individual libraries actually lump together into their reports, affording little qualitative value.

The results of this study indicate that the Warner classification system may be a reasonable and more realistic alternative to the traditional reference categories required by the national reporting agencies. Other academic instiutions are testing Carnegie Mellon's READ Scale, and it appears to be another useful approach to the new reference environment.[30] Whichever system is selected, if we are to make cross-institutional comparisons relevant, it may be time for the national reporting agencies to create a new standard for reference classification that better reflects the diverse types of reference interactions commonly seen in twenty-first-century libraries.

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APPENDIX: THE SURVEY INSTRUMENT

The four classification categories described by Katz[1] below have been used in one format or another by many libraries for years. Each type of category is defined and brief examples provided below.

Katz Classifications Descriptions / Examples

Directional—General or directional information; rarely requires more than geographical knowledge of key locations; e.g., Where is the catalog?
Ready Reference—Requires single, straightforward answer such as those found in standard reference works in print or online; e.g., How long is the Amazon River?
Specific-search—Queries usually require multiple resources; e.g., Where can I find information about gender bias in business?
Research—Lengthy detailed assistance; may require a specialist.

The questions or information queries that follow are typical of those received at the reference desk at many institutions. Some of these questions may not be typical of those asked at your particular institution but, using your overall reference experience, please try to categorize each question as you think you would if you were in that type of library environment.

Using the categories described by Katz, please assign each reference question to one, and only one, category.

Question	Directional	Ready Reference	Specific Search	Research	I am unable to place this into a category	I would not record this as a reference question
Do you have laptop computers available for checkout?	❑	❑	❑	❑	❑	❑
I need to find critical analyses of books by Alice Walker.	❑	❑	❑	❑	❑	❑
Do you have one of the blue sheets that talk about business resources?	❑	❑	❑	❑	❑	❑
I'm trying to access FirstSearch from home and it's asking me for a password. What am I doing wrong?	❑	❑	❑	❑	❑	❑
Do you have the *Wall Street Journal* for January of this year?	❑	❑	❑	❑	❑	❑
Do you know how Joan of Arc was executed?	❑	❑	❑	❑	❑	❑
I need help using the microfilm reader.	❑	❑	❑	❑	❑	❑
How do I use the computer to register for a course or workshop?	❑	❑	❑	❑	❑	❑
I need the section where I would find information on the economy of France.	❑	❑	❑	❑	❑	❑
Do you own the book entitled *Broken Trust*?	❑	❑	❑	❑	❑	❑
How do I renew my books?	❑	❑	❑	❑	❑	❑
How late is the fitness center open today?	❑	❑	❑	❑	❑	❑
There is a strange person bothering me on the second floor—can you help?	❑	❑	❑	❑	❑	❑
How do I change my margins in a Word document?	❑	❑	❑	❑	❑	❑
How do I cite a government document in APA style?	❑	❑	❑	❑	❑	❑
I need books and articles about censorship.	❑	❑	❑	❑	❑	❑
May I use your stapler?	❑	❑	❑	❑	❑	❑
I need articles about innocent people who were wrongly given the death penalty.	❑	❑	❑	❑	❑	❑
Where do I find call number 811.54?	❑	❑	❑	❑	❑	❑
How do I access the wireless network?	❑	❑	❑	❑	❑	❑

[1]William A. Katz, *Introduction to Reference Work*, 8th ed. (Boston: McGraw-Hill, 2002): 16.

The four categories below make up the new classification devised by Warner[2] in 2001. Each type of category is defined and brief examples provided below.

Warner Classifications Descriptions/Examples

Nonresource-based—Does not require a resource to answer; might be addressed by signage or help sheet; directional or policy questions; e.g., How late are you open?
Skilled-based—May require a demonstration to answer; "how-to" questions; e.g., How do I download to a disk? How can I find a video in your catalog?
Strategy-based—Formulation of a strategy and selection of resources is required. May require individual subject approach; e.g., I need articles on cancer and nutrition.
Consultation—Longer encounters outside the regular desk duty; research recommendations or report preparation for consultation; e.g. What criteria should I use to evaluate a website?

Question	Nonreource-based	Skill-based	Strategy-Based	Consultation	I am unable to place this into a category	I would not record this as a reference question
How do I print multiple Power-Point slides on one page?	❑	❑	❑	❑	❑	❑
Is the computer center open on Sundays?	❑	❑	❑	❑	❑	❑
My things are missing from the third floor (possible theft)	❑	❑	❑	❑	❑	❑
Where do I find call number PR?	❑	❑	❑	❑	❑	❑
Do you have any books by Fannie Flagg?	❑	❑	❑	❑	❑	❑
How do I access full-text articles from home?	❑	❑	❑	❑	❑	❑
I need books and articles about religious traditions in Africa.	❑	❑	❑	❑	❑	❑
I need a recipe for sweet potato casserole.	❑	❑	❑	❑	❑	❑
How do I cite a webpage in MLA style?	❑	❑	❑	❑	❑	❑
How do I get a book from another library?	❑	❑	❑	❑	❑	❑
Do you have the latest issue of the journal *Contemporary Psychology*?	❑	❑	❑	❑	❑	❑
Do you have that orange piece of paper that lists educational websites on it?	❑	❑	❑	❑	❑	❑
How do I use the computer to check my property taxes?	❑	❑	❑	❑	❑	❑
May I borrow a pencil?	❑	❑	❑	❑	❑	❑
How do I connect my laptop to the library computer network?	❑	❑	❑	❑	❑	❑
I need information on how religion has affected children's literature.	❑	❑	❑	❑	❑	❑
Do you have a scanner I can use?	❑	❑	❑	❑	❑	❑
Where can I find critiques of Shakespeare's *Hamlet*?	❑	❑	❑	❑	❑	❑
I need the section of the library where I can find books on Greek mythology.	❑	❑	❑	❑	❑	❑
Can you show me how to reduce on the copier?	❑	❑	❑	❑	❑	❑

[2] Debra G. Warner, "A New Classification for Reference Statistics," *Reference & User Services Quarterly* 41 (Fall 2001): 51–55.

Demographic information:

Q3: Please select one category that best fits your library:
- ❑ Public
- ❑ Academic
- ❑ Special
- ❑ School
- ❑ Other

Q4: Please provide the approximate size of your library collection.
- ❑ 0–9,999 volumes
- ❑ 10,000–49,999 volumes
- ❑ 50,000–99,999 volumes
- ❑ 100,000–249,999 volumes
- ❑ 250,000–499,999 volumes
- ❑ 500,000–999,999 volumes
- ❑ More than 1,000,000 volumes

Q5: How many years have you been working at a reference desk?
- ❑ 0–2
- ❑ 3–5
- ❑ 6–10
- ❑ 11–10
- ❑ More than 20

Q6: Please indicate your educational background (check all that apply).
- ❑ Associate degree
- ❑ Baccalaureate degree
- ❑ Graduate student in library and information science (MLS)
- ❑ Master's degree in library and information science (MLS)
- ❑ Master's degree in a subject other than library and information science
- ❑ PhD in library science
- ❑ PhD in a subject other than library and information science
- ❑ Other

Q7: Please select the position description that best fits your current position.
- ❑ Graduate assistant in library and information science
- ❑ Graduate student in library and information science
- ❑ Library clerk
- ❑ Library technical assistant
- ❑ Librarian (MLS)
- ❑ Professor in a school of library and information science
- ❑ Other

Q8: Please select your age group:
- ❑ 24 and under
- ❑ 25–29
- ❑ 30–39
- ❑ 40–49
- ❑ 50–59
- ❑ 60–69
- ❑ Over 70

Q9: Do you have any comments that you would like to add about classifying reference questions?