INTRODUCTION

With the increased commercialization of online resources and technical know-how of users, reference librarians are sometimes sought out for their expertise in knowledge management/subject specialization vis-à-vis the reference transaction. Current quantitative statistical measurements do not adequately reflect the effort/skills/knowledge associated with this work. A 2002 survey conducted by the Association of Research Libraries (ARL) gives supporting evidence that many academic institutions are not completely satisfied with the usefulness of the reference statistics gathered, noting that "the migration of reference activity to areas beyond the traditional reference desk (e-mail, chat, office consultations) has further motivated many libraries to re-examine and modify current practices" (ARL SPEC Kit 268, Reference Services & Assessment, 2002). The ARL survey hoped to reveal current best practices, but instead "revealed a situation in flux":

The study reveals a general lack of confidence in current data collection techniques. Some of the dissatisfaction may be due to the fact that 77% of the responding libraries report that the number of reference transactions has decreased in the past three years. With many librarians feeling as busy as ever, some have concluded that the reference service data being collected does not accurately reflect...
There appears to be a feeling of pressure of not performing when the professional literature speaks of declining reference numbers and gives little or no credit for reference/research assistance. It was with a similar sentiment that the READ Scale was developed at Carnegie Mellon University. The READ Scale (Reference Effort Assessment Data) is a six-point scale tool for recording vital supplemental qualitative statistics gathered when reference librarians assist users with their inquiries or research-related activities by placing an emphasis on recording the skills, knowledge, techniques and tools utilized by the librarian during a reference transaction (Figure 1). The READ Scale was launched at Carnegie Mellon with a trial in spring 2003, followed by an academic year study in 2003-2004. The READ Scale emphasizes effort, recognizes time dedicated to the transaction, and highlights the knowledge skills used by the librarian at the time the reference transaction occurs. This method is especially appealing in a profession where the industry standard for recording statistical data is a hash mark that records and rewards quantity as opposed to quality. This paper will introduce the READ Scale by describing the concept, methodology, data gathering, and study expansion.

**CONCEPT**

The current methodologies for data gathering of reference statistics value numbers alone and do not adequately reflect the effort of the work. By implementing a qualitative statistics gathering approach, effort can be documented on an individual and departmental level. Academic reference librarians appear ready to utilize qualitative data mining as a way of effectively capturing reference transaction statistics in an attempt to express a more accurate representation of this work. Qualitative methodology could enable a retooling of staffing strategies and utilize the skills of the academic librarian more fully. Furthermore, qualitative methodology may increase positive self-awareness of the professional librarian and enable libraries to participate more fully in the outcomes assessment favored by many administrative and accreditation bodies. The READ Scale gives librarians an opportunity to record a specific aspect of their responsibilities, the reference transaction, identified by staff and library administrators as the most vital role of the position. The self-evaluation aspect encourages self-monitoring and could result in a personal sense of professional accomplishment. For a reference department tracking efforts, collecting traffic patterns and recording the number of questions that need specific skill sets can help to formulate desk-staffing strategies, improve outreach efforts and utilize outcome assessment techniques.

**SERVICE POINTS**

Six service points located in four buildings at Carnegie Mellon University participated in the yearlong study: Hunt Library Reference; Arts & Special Collections; Music Listening and Slide Collection; Engineering & Science Library; Mellon Institute Library; and Hunt Library Periodicals. Staffing for these service points includes 15 liaison subject specialists/reference librarians, five part-time graduate assistants and four full-time library specialists or assistants. The librarians hold faculty appointments at the ranks of Librarian, Senior Librarian or Principal Librarian.

**METHODOLOGY**

The idea of using a scale format was conceived by Bella Karr Gerlich and evolved through collaborative work with Jean Alexander and Lynn Berard. All reference staff members were invited to an open forum to discuss the possibility of the units participating in a study to test the READ Scale qualitative data gathering model. The staff shared the opinion that the traditional method of gathering reference statistics was not adequate and agreed that the units should participate in a study to either validate or invalidate the READ Scale method. The next step was to test the READ Scale. First, participants would require input regarding the scale's size and definitions for each of the numerical categories. Second, since this scale is a qualitative instrument that relies on individual personal assessment, the researchers needed to have agreement on how to quantify effort. Third, the elements/duration of the study would need to be defined. All agreed that a six-point scale would be adequate; "1" representing the least effort expended and "6" representing the greatest effort. Some study participants suggested the addition of particular elements or clarification to certain points by changing wording in the definitions. Sample questions were then solicited from the reference desks in order to test the scale and normalize, as much as possible, the actual rating of effort by individuals. All participants were asked to answer and rank their effort for each of the sample questions. It was agreed that responses would be evaluated by Jean Alexander. Rating effort for transactions at 1, 2 or 6 levels were typically unanimous, while the 3, 4 and 5 ratings revealed some differences between individuals' perceived rankings. This was thought to be due to subject specialization and how individuals tend to 'grade' (hard or easy), although there was always a majority agreement. Alexander summed up how the transactions were resolved, the recommended rating to assign, and the reason for the rating. This enabled individuals to adjust their personal grading habits for traditional inquiries. It was important to recognize that where subject specialization is the norm, effort associated with customer service should be recognized. This is why the number of elements and time associated with the scale rankings are important to note, so that those staff who are helping someone out of their area of expertise should feel comfortable assigning a higher scale point than would the librarian with a specialization in the area. Reference librarians were asked to conduct the study in their offices. Most did not actively keep track of those transactions that took place away from the reference desk, yet anecdotal evidence suggested that this is where the majority of their efforts assisting patrons were being spent, especially with those clients in the area of their liaison responsibilities. This data was compiled to
help determine at which service point users sought assistance and at what level it was theorized that more transactions of a high level would be recorded by individuals in their offices rather than at a service point. The READ Scale data recording method utilized the existing paper/online form that captured day, hour and approach type (virtual, phone and walk-up) for both directional and reference questions, on and off desk. The difference was that participants utilized a number instead of a hash mark when recording a reference transaction. The scale was pretested for two weeks in spring 2003. Positive feedback encouraged participants to proceed with plans to conduct a study of the scale for the full academic year in 2003 - 2004. Comments were gathered and slight clarifications were made to the definitions, with a time data measurement element added that would be used for two preselected weeks in order to determine the average times used for answering questions in each category.

### DATA GATHERED

#### Observations from Participants
Most participants found the scale easy to use. Comments to the contrary were described in small terms and on personal levels; these included difficulty in memorizing the scale and deciding how to rank electronic questions. None of the librarians felt the scale needed to be changed at the end of the yearlong study. No one complained. Staff members were excited to see some details of how reference librarians work. General comments that were received in subsequent interviews of participants were favorable. They were interested in the "value-added" concept the scale brought to the reference transaction. Reference staff expressed interest in continuing to record statistics using the READ Scale, noting that it made them "think and appreciate the work that goes into answering questions and helping people" and that the scale encouraged them to be "a little more introspective about what I'm doing, and that's not a bad thing either." When asked how they felt about self-evaluating and using the scale for personal assessment, one staff member said, "I think it's important. I support it even though it can be subjective. I think over time it can give you an idea of what kind of questions we answer and the work that goes into it because it is all very fleeting when you put a tick--you're not really getting any information but quantitative things acting on their own." Others agreed with this point of view, and ideas and discussions on how to use the data began to emerge. One librarian said "Well, one of the things I would really like to do with data of this nature is to try to get a handle on what value or what impact we have on the population that we serve. If we can at least get an idea of what the general breakdown between the different intensities of reference service are, how much effort in each category we are expending, we'd have measures with which to evaluate the nature of the question, and knowing that, try to come up with a value for it or an impact for it..." Another librarian suggested that the data gathered from the READ Scale could have even more impact: ":....if all we're ever going to get is an estimate of our impact on society, some of the things like a 4 or a 5 or a 6 have such an impact on that individual's life. In some cases they make or break their earning potential for the rest of their life, and, you know, depending on how much they listen to you."

#### Key Findings
Reference staff felt that the current methodology for keeping reference statistics, the practice of counting transactions only, does not adequately portray the importance of this role nor the skill and experience they bring to their work. Reference staff found the READ Scale easy to use and descriptive of effort previously unrecorded, giving voice to their effort, knowledge and skill as professionals. The participants like the qualitative component of the READ Scale, take self-evaluation seriously and are interested to learn more about themselves as reference librarians and the information-seeking behavior of their users from the collected data. The majority agreed they would be inclined to adopt this methodology of gathering statistics. There are differences in patterns regarding the traditional category of questions among the three primary reference desks in our study: Hunt Reference has a higher percentage of directional questions than either Arts or Sciences (Figure 2). This is interesting because it suggests users may be discipline conscious in their information-seeking behavior. This idea is further supported as the statistics gathered also show users actively seeking assistance at service points other than the reference desk. However, these service points fielded an insignificant number of transactions above a level 3 question, recording only 25 questions at the number 4 level and two at the number 5 level, signifying that when it came to in-depth reference inquiries, users sought out or were directed to librarians at the respective reference desk. The study also revealed that the bulk of inquiries to service points continue to come in the form of personal contact (in person or by phone) while the bulk of queries (Figure 3) to individual librarians (off-desk) come in the form of email. The study revealed that the majority of the transactions recorded were in the 1 - 3 READ Scale range (Figure 4, page 12): Off-desk transactions followed a different pattern -- with fewer level 1 and 2 transactions and a higher percentage of 3, 4, 5 and 6 level questions (Figure 5, page 12). These charts again demonstrate that the method used to approach reference staff off-desk is done electronically, though the personal approach is still highly valued, with most reference transactions continuing to occur at a public service point. Finally, time was recorded for all transactions for a two-week period in an effort to test the validity of the scale regarding the time element. This exercise revealed no surprises and all transactions recorded were within the scale ranges described (Figure 6).
**Next steps / Process of expansion of the study**
The participating librarians in this study felt that the role of reference/research assistant is even more important in this age of the information overload and requires more skills than ever before. The statistics that are gathered quantitatively do not reflect the evolution of effort/knowledge/skills required to assist today's users. The response to the READ Scale methodology was positive, so much so that four reference service points have elected to adopt the READ Scale at Carnegie Mellon as their primary tool for recording reference statistics. Their reasons for continuing to gather data using the scale vary from the personal observations described in this paper to wanting to gather enough data over time to be able to observe trends and assemble assessment options. This reaction encouraged the application for the joint research opportunity between GCSU and Carnegie Mellon now underway to expand the study to 15 academic libraries in order to test the validity, usability, and adaptability of the scale in various academic environments. We feel this work could significantly impact how reference statistics at academic institutions are collected and analyzed. By expanding the READ Scale study to a more diverse pool of institutions, we hope to learn if recording qualitative reference data is valued and useful to our professional work and if the READ Scale is a viable, adaptable tool for gathering that information. ADDED MATERIAL Bella Karr Gerlich is Associate University Librarian at the Library & Instructional Technology Center, Georgia College and State University; G. Lynn Berard is Principal Librarian, Engineering and Science and Editor, FOCUS, at the University Libraries, Carnegie Mellon University. Figure 2: Frequency of Categories [Graph or Chart Omitted] Figure 4: Question by Type, All Service Points [Graph or Chart Omitted] Figure 5: Off-Desk [Graph or Chart Omitted] Figure 3: Transaction Approach Types - Service Points and Off Desk [Graph or Chart Omitted] Figure 6: Average Time per Question Type [Graph or Chart Omitted]

**Figure 1 -- The READ Scale**

**READ Scale -- Reference Effort Assessment Data Scale**
Definitions and examples of numbers rating:
1: Answers that require the least amount of effort and no specialized knowledge skills or expertise. Typically, answers can be given with no consultation of resources. Length of time needed to answer these questions would be less than 5 minutes. Examples: directional inquiries, library or service hours, service point locations, rudimentary machine assistance (locating or using copiers; how to print a document or supplying paper).
2: Answers given which require more effort than the first category, but require only minimal specific knowledge skills or expertise. Answers may need nominal resource consultation. Examples: call number inquiries, item location, minor machine and computer equipment assistance, general library or policy info (how to save to a disk or email records, launching programs or re-booting).
3: Answers in this category require some effort and time. Consultation of ready reference resource materials is needed; minimal instruction of the user may be required. Reference knowledge and skills come into play. Examples: answers that require specific reference resources (encyclopedias or databases); basic instruction on searching the online catalog; direction to relevant subject databases; introduction to web searching for a certain item; how to scan and save images, more complex technical problems (assistance with remote use).
4: In this category, answers or research requests require the consultation of multiple resources. Subject specialists may need to be consulted and more thorough instruction and assistance occurs. Reference knowledge and skills needed. Efforts can be more supportive in nature for the user, or if searching for a finite answer, difficult to find. Exchanges can be more instruction-based as staffs teach users more in-depth research skills. Examples: instructing users how to utilize complex search techniques for the online catalog, databases and the web; how to cross-reference resources and track related supporting materials; services outside of reference become utilized (ILL, tech services, etc), collegial consultation; assisting users in focusing or broadening searches (helping to redefine or clarify a topic).
5: More substantial effort and time spent assisting with research and finding information. On the high end of the scale, subject specialists need to be consulted. Consultation appointments with individuals might be scheduled. Efforts are cooperative in nature, between the user and librarian and/or working with colleagues. Multiple resources used. Research, reference knowledge and skills needed. Dialogue between the user and librarian may take on a 'back and forth question' dimension. Examples: false leads, interdisciplinary consultations! research; question evolution; expanding searches/resources beyond those locally available; graduate research; difficult outreach problems (access issues that need to be investigated).
6: The most effort and time expended. Inquiries or requests for information can't be answered on the spot. At this level, staff may be providing in-depth research and services for specific needs of the clients. This category covers 'special library' type research services. Primary (original documents) and secondary resource materials may be used. Examples: creating bibliographies and bibliographic education; in-depth faculty and PhD student research; relaying specific answers and supplying supporting materials for publication, exhibits etc-working with outside vendors;, collaboration and ongoing research.