Study of the Libraries' Information and Research Services

Report

Prepared by the Information and Research Services Team (IRS-T) 8/16/2011

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Summary

In spring 2011 Public Services Division Mangers charged the Information and Research Services Team (IRST) to analyze and make recommendations for service improvement for all areas of Information and Research Services. IRST conducted surveys, interviews, literature review and an environmental scan of University of Maryland Libraries and other institutions in order to assess and evaluate the current information services situation and collect information for the following recommendation. In the 'Considerations' and 'Recommendations' sections, IRST identified the following areas that need to be modified: staffing, technology and physical spaces. The appendices section of this report contains the charge and a summary of findings.

Considerations

- 1. Existing reference services are a challenge due to the number and diversity of both the physical and virtual reference points and staffing levels.
- 2. Queries to reference staff have changed with more complex and in-depth questions coming to subject librarians via their departments. At the same time, reference staff has declined while desk hours have remained stable. There are fewer reference questions at the information desks and more directional questions. Budgetary studies in other institutions have determined that it is expensive to have librarians working at the information desk under current environmental conditions.
- 3. Technologies make it easier to communicate with librarians and have the potential to change access and delivery of reference assistance
- 4. McKeldin is the central provider of information and research services with greater usage and consequently a greater need for resources and modifications. Branches have their own unique circumstances so recommendations will have to be adjusted accordingly. Some of these recommendations have been already implemented in Branches.
- Final decisions regarding physical space are pending the arrival of the Head of Terrapin Learning Commons (TLC) and Student Support Services, and the Architectural study of McKeldin.

Recommendations

The overarching idea of this section is the need to reconfigure use of staff and physical space to reflect current best practices, and changes in staffing levels, while considering both short and long term planning.

Topic 1: Staffing Recommendations:

1. Limit subject librarians service hours at general service points.

- a. Use a combination of technology and office hours to have subject librarians respond to walk in in-depth reference questions, referrals and consultations by appointment.
- b. Subject librarians will develop deeper understanding and will provide better support for more in depth scholarly and research services needs.
- c. Subject librarians will use their time away from the desk to liaise with departments, build relationships with individual faculty and students, implement embedded services, create tutorials, work intimately with their collections, develop more robust instruction, and produce training materials for staff.
- d. If it is determined that there should to be a regular presence of a professional librarian during all or some hours of information desk operations, consider hiring (or re-deploying a current staff member) generalist librarians whose primary responsibility will be general reference services, including coverage of evening/weekend hours. Post MLS librarians should be a good solution here.
- 2. Hire or re-deploy full-time staff for McKeldin Information & Research Services (at least two full time staff) to cover weekends and to allow more flexibility during regular week days. Having permanent staff on weekends will allow for greater staffing continuity and provide a more consistent knowledge base to better respond to building issues and security concerns beyond the typical scope of Information & Research Services.
 - a. Need more non-librarian staff to handle the significant number of informational questions (hours, directional, equipment, photocopy, printing and computer). A survey collecting data at the McKeldin Information desk in Summer 2011 noted the increase in printing and computer questions and the decline of "reference" questions at the desk.
- 3. Institute a more robust training program, including peer-training and information sharing forums, where all levels of staff can conjure, to showcase databases, learn equipment, exchange ideas, and deal with reference related issues. The TLC and Student Support Services Head will implement this program.
- 4. Hire graduate students from the i-School to work as information / research services staff, and create a rotating practicum program for them to provide knowledgeable service and gain experience on the reference desk.

Topic 2: Technology Recommendations:

- Use technologies such as Skype, Meebo, and mobile devices to make it easier to
 communicate meaningfully with librarians and staff who aren't at the reference desk,
 providing service in the TLC, or aren't even in the library. Technologies should be
 increasingly deployed in providing reference services. Such use of technology is consistent
 with Libraries understanding of TLC as both a physical and virtual space.
- 2. More and more students use mobile devices and specialized software. The Libraries' need to be prepared to provide staff support, especially for the devices that the library loans.

- 3. Collaborate with the copy shop, ITD, and Access Services to offer more streamlined expert assistance for the printing, computer hardware/software, lost and found, and building maintenance every hour the information desk is open.
- 4. Evaluate our current general virtual reference services, CHAT/AskUs and Ask A Librarian.
 - a. Examine who provides these services
 - b. Adjust hours (CHAT/AskUs) based on the time of year and usage statistics
 - c. The role of the monitor for the Ask A Librarian email service needs to be examined. The monitor does not have to be a librarian; however a dedicated person is a must.
 - d. Investigate products like LibAnswers as complement to the chat service.

Topic 3: Physical space Recommendation:

- The physical locations of the information desk, welcome desk, and circulation desk in McKeldin are limiting. The current layout results in many questions coming to the reference desk but discourages input from other departments who might be better trained or suited to answer them such as circulation, copy shop, stacks maintenance, building security, or ITD).
 - Reconfigure the first floor space of McKeldin so that circulation, information, welcome desk and copy shop staff are situated to encourage greater collaboration of work and services.
 - b. This close proximity could also draw on staff from ITD and stacks maintenance in delivering services to patrons.
 - c. Develop a better understanding of how TLC on the second floor of McKeldin Library will interact with the services on the first floor.

Topic 4: Areas for future consideration:

- 1. Evaluate current subject responsibilities among subject librarians. Determine which additional subject librarians need to be hired from the pool of long-vacant subject specialist positions.
- 2. Look into a possibility of creating a Scholars' Lab, a dedicated place staffed by experts for in-depth reference services and technology consultation.

Appendices

Study of the Libraries' Information and Research Services – PSD Managers Charge

Methodology Summary of Staff Survey

Analysis of Survey Data

SWOT Analysis of Staff Survey--McKeldin

SWOT Analysis of Staff Survey—All others

Summary of Environmental Scan of Selected Institutions

Literature Review Summary

Survey of Reference & Information Service Sites: Public Services Division

What Questions Are Users Asking at the McKeldin Information Desk? Summer 2011 Survey

Study of the Libraries' Information and Research Services

January 4, 2011

Introduction

On June 30, 2010, the University Libraries released its new Strategic Plan. This Plan articulates how the Libraries will support the growing needs and expectations of the academic community:

"...encouraged by students and faculty, we will not only transform and improve, we will lead."

The Public Services Division plays a key role in executing the goals, objectives and action items in the Plan. From these goals, the Director of Public Services selected the following five priorities for the work of the division in fiscal year 2011:

- 1) Study the Libraries' Information and Research Services
- 2) Study Branch Libraries
- 3) Prepare for PSD Reorganization and Workforce Planning
- 4) Develop a Vision of Future Public Services
- 5) Review the Federal Depository Library Program (FDLP)

Charge

IRS-T (supplemented by a staff member who provides information and research services, and a staff member provides access services) will start and lead priority # 1 listed above. IRS-T is charged to:

Study the Libraries Information and Research Services and make recommendations for service improvement. This study should be broad in scope encompassing all areas of Information and Research Services, including general reference services at McKeldin and branch libraries, TLC services, direct reference services provided by subject specialists, CHAT, and AskUs services.

The work of IRS-T will primarily be assessment and evaluation of current Information and Research Services, and recommend changes to better support user needs given the libraries' and academic landscapes.

Scope of the Work

IRS-T will do the following work:

 Assess the effectiveness of existing service points, which include the various physical and virtual reference/information service points across Libraries, levels and types of staffing, distribution of specializations/expertise, etc.

- Perform a literature review and environmental scan of how our peer institutions and other institutions of higher learning are offering reference/information services for users.
- Study collected statistics of existing service use.
- Gather input from staff who provide reference and information services to solicit ideas, and gather feedback on recommendations.
- Perform budget analysis of existing service use, such as for example cost effectiveness based on staffing levels and hours of operation across the Libraries.
- Perform a SWOT (Strength, Weaknesses, Opportunities, and Threats) analysis based on the findings.
- Look into the new technologies and make recommendations about their incorporation into the reference models.
- Make recommendations about where and how services can best be delivered to users considering various locations and staffing levels.
- Explore potential partnerships with the iSchool as related to reference services.
- Recommend a plan for redesigning Libraries Information and Research Service model to better align it with user needs within a broader UM Libraries environment and overall academic landscape. This plan should define at least one possible service model, which will include locations of services, nature of service per each location, staffing levels by each location, where direct reference service by subject librarians is considered a service location.

Duration:

- Work to commence in January 2011
- Report due to PSD Managers by May 1, 2011 (or earlier if completed).

Deliverable(s) / Work Product(s):

Written report and recommendations of IRS-T on the assigned charge.

Sponsors:

- Tanner Wray, Director
- All public services managers

Methodology Summary of Staff Survey

Timeline

03/15/2011: The survey was launched and an email was sent to the 'reference' email reflector.

3/25: Reminder email sent.

4/4: Reminder email and notification of extension in deadline. (The initial deadline was March 31st, but because of Spring Break and ACRL we extended the deadline).

4/6: Cindy sent a request to PSD managers to encourage their staff to take the survey

04/12: The survey was closed.

Survey Questions: 5 open ended and 1 multiple choice

- 1. What do the Libraries do well in providing reference and information services?
- 2. What are your frustrations in providing reference and information services?
- 3. How can we improve our services to users? Do you have any recommendations for new services or models?
- 4. If applicable, please tell us how much time you spend on information reference work outside your scheduled shifts (desk, chat, etc.). What kind of tools do you use (email, phone, IM (what kind), Skype, etc.)?
- 5. Please share any additional comments / questions / concerns / suggestions here.
- 6. Please identify your location (optional):
 - a. Branch
 - b. Special Collections
 - c. McKeldin
 - d. Other
 - e. Prefer not to answer

Demographics

~100 people eligible to take survey

28 people completed the survey

They self identified themselves in the following categories:

- 6 Branch
- 4 Special Collections
- 15 McKeldin
- 1 Other
- 2 Prefer not to answer

85 individual people visited the survey website

Analysis of Survey Data

We performed a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis on the survey results. Each response was analyzed and placed in one of the SWOT categories. Some responses were out of scope (i.e., they did not reflect a specific strength, weakness, opportunity, or threat), and those responses were ignored. The text in bullet points in the table below represents our interpretation of various comments. The numbers in parentheses represent the number of individual respondents who provided similar feedback. For example, ten McKeldin respondents commented that the temperament and skills of our staff represented strengths. Nine respondents said the staffing levels at the reference desk were inappropriate and constituted a weakness. Bullet points that do not end in numbers in parentheses represent comments made by only one respondent. Obviously, some subjectivity on our part was required to perform this type of analysis. However, we were careful to only consider responses as similar to others in clear cases. When in doubt, we erred on allowing the individual to speak for him/herself. For example, one person said the lack of a weekend supervisor at the McKeldin reference desk was a weakness, and we considered that substantially different enough from "inappropriate staffing levels" to grant it its own bullet point. We also used our judgment in determining how many discreet ideas were contained in the various responses. In some cases respondents wrote lengthy paragraphs that were essentially one idea (e.g., "we need better training programs"). In other cases, single paragraphs contained a number of ideas that became individual bullet points below.

The SWOT analysis is presented in two tables. The first table analyzes responses made by those who identified themselves as being located in McKeldin (question 6 in the survey). The second table includes "All Others" and represents staff that provided one of the following answers to question 6: Branch, Special Collections, Other, and Prefer not to answer.

SWOT Analysis of Staff Survey--McKeldin

Strengths	Weaknesses
 Service orientation, dedicated, knowledgeable, and flexible staff (10) Guides (2) Many ways to reach librarianswalk-in, chat, email (2) Online resources Consultation services Email reference Face-to-face contact with researchers Hours are adequate 	 Inappropriate staffing levels at desk. Not enough printing, security, and computer support. Librarians spending too much time at desk for too few reference questions (9) Weak training program for student desk assistants (2) Discoverability of hidden collections Lack of weekend supervisor Students have trouble finding books on shelf Lack of forum for librarians to share knowledge, experiences
Opportunities	Threats
 Since fewer reference questions come to desks, find new uses for librariansEmbedded/blended librarians/"roving reference," more staff to cover desk and do triage, separate area in MCK for librarians to work with researchers, more time for liaisoning with depts., more in-person consultations (13) Take advantage of new technologies to increase online options for working with librarians (texting, IM, more online guides, Skype) (4) Given staff shortages, refocus efforts on UM population (3) Use Stack Map, shelf escorts, better signage, to help people better find books on shelves Create ongoing online or in-person workshops on library skills Partner with iSchool to bring their students to work at the information desk, by creating one- or two-year internships, using L&A funds, etc. 	 Little reference work occurring at desk (3) Chat is open to anybody, not just UM people/most questions on weekends aren't from UM community (also opportunity-refocus on UM population) (3) Reference desk is no longer reference desk, but all-purpose service desk/reference librarians shouldn't be clearing paper jams (3) "I don't think the administration realizes the complete size of all we do at the desk." Students are more impatient, need help with vague assignments eJournal moving walls are difficult to explain to users and frustrating Users seem intimidated by McKeldin (see Opportunity: "roving reference")

SWOT Analysis of Staff Survey—All others

Strengths	Weaknesses
• Fulfilling user needs (4) • Walk-in reference with knowledgeable staff (4) • Guides (generally) (3) • Lots of options for users, in-person, IM, chat, phone, email (3) • Skilled reference librarians available many hours (2) • Email reference • Instruction • Student workers (incl. GA's) are important to information services • Libguides (specifically)	 Reference services does not seem to be a priority to managers (4) Desk staff need to be more engaged and proactive (3) Training for staff and students (lack of)/lack of information sharing/cross training (3) Time spent on other campus' questions (2) librarians don't have any time to participate because of other commitments / need more professional involvement at desk (2) Inappropriate staffing of desk (librarians staffing desk and there aren't any reference questions) (2) Need to evaluate if information provided to patron was sufficient Not enough time to liaise with departments Don't have access to all resources needed Library websites Drop-in reference services is inefficient No "best practices" for reference work Organization and layout of Research Port
Opportunities	Threats
 Need to embed ourselves at point of need / strengthen liaison relationship (3) Prioritize our services to faculty and graduate students/strengthen ties to faculty and graduate students to provide better service to all—classroom instruction, understanding of assignments, syllabi available at desk (3) Embed chat widgets at point of need (catalog, Research Port) Make list of our databases available to anyone (2) We should offer more advanced research services via chat (2) Need to be more strategic in time management. Offer more targeted research services (2) Use new technologies that our patrons use and like: mobile devices; podcasts; other web 2.0 technologies Facilitate access to subject specialists through Blackboard Look at Springshare Libanswers as an alternative to QuestionPoint Organize a yearly "Library Day" similar to GIS Day More interaction between McK Ref and Special Collections Each staff member could have an IM handle to reduce email Librarians could spend time at other service points to learn Need more focus on faculty-defined learning outcomes rather than assuming students know what they want 	 Users not aware of our services (4) Lack of understanding the Libraries among faculty and students (2) Don't have enough tools or training to offer virtual instruction Users expect highly advance reference service to be available when needed but we don't have the staff or commitment from management to offer it Understaffing/librarians have too many commitments that don't involve direct reference service Personnel shortages

Summary of Environmental Scan of Selected Institutions*

Interviews with the institutions, key points:

- Multiple institutions have decreased the number of their service points and the numbers of staff working at their service points (NYU, Duke, Ohio, Indiana, etc.)
- No two institutions use the exact same model for reference/information service.

Separate info/reference desk:

- Service points that provide information/reference are called different names: Reference Desk (Duke), Information Desk (most common), Research Center Desk (U. of Denver), Research and Scholarly Services (U of Illinois), etc.
- There are many different variations of how services are provided. Some libraries still maintain very distinct reference/information desks, while many have reference/information desks with a combination of staff. However there is a growing trend of multifunctional reference/research/information/ service points, especially in branches.
- It seems that different sites even within the same library system have different staffing hours. It also looks like many of these libraries do not offer information / reference services (particularly by librarians) for all the hours the libraries are open. Generally, the hours of 9/10 am 5/6 pm are the most commonly offered for information/reference services.

Staffing

There is a variety of staffing models (combination of librarians, support staff and graduate students). However it seems that no more than one or two people are at the service point at any time.

Librarians

- Most information/reference service points have reduced librarians' service hours.
- Most libraries do not have librarians serving evening/weekend hours. Those that do, have a dedicated core of librarians hired for and assigned to the information desk services (Duke, Indiana, UVA). Duke uses only librarians at the main reference desk.
- > Librarians often have additional responsibilities.

Staff

> Several institutions use support staff to provide reference/information services.

Students

It seems that most libraries extensively use graduate students on their service points to provide reference type services. Many provide extensive training.

> Those institutions with library schools use graduate students from the library school.

^{*} Duke, Indiana Bloomington, NYU, Ohio State, UC Berkeley, UCLA, UNC Chapel Hill, U of Denver, UVA

Most institutions do not use undergraduate students to provide reference services, except for Ohio State.

Non – Library staff at information service points

Some libraries have University IT staff (for example, Indiana, U of Denver, UVA)

Type of reference services provided

• Seems the same what we do here (any question that comes to a service site).

Virtual Reference

- There is a variety of service models for providing virtual reference. Some combine chat while at the desk (UNC, Denver, Duke). Most seem not to do virtual reference at their physical service points, and have migrated this service to individuals' desks.
- A variety of staff provide virtual services: librarians (there are three dedicated reference specialist at UC Berkeley), combination of librarians and staff with a minimum of 1 librarian (NYU), support staff and students (Ohio), volunteers of various levels of staff (graduate students, librarians, support staff) (UCLA), librarians and grad students (Denver)

Miscellaneous:

- Placement of computer monitors at service sites either side by side or back to back so that one faces the service provider and another faces the student.
- There are a number of institutions that have revised or are in the process of evaluating and changing their reference/information services.

Literature Review Summary

Trends in Reference Services

Reference service is an outgrowth of the 19th century American Public education movement to have a literate working class of new arrivals. Reference service was seen as a way to help this population make use of libraries as well as integrate them socially and politically. The functions of reference were and remain unchanged: instructing patrons on how to use the library, answering queries, helping patrons select resources and promoting the library within the community. What has changed are the tools and models for providing reference services, the need to prove the value of these functions and their ability to satisfy the information needs of the community. (Logan 2009)

A survey of 191 academic libraries found that 80% maintained a single reference desk and 50% of these libraries continued traditional reference activity. However, trends have emerged showing the use of non-degree personnel in 62%, a decrease in reference questions in 42%, and a focus on the Internet and online databases. The standard practice was to use non-professional staff without professional backup. This resulted in a change of the librarians' duties, spending more time on instruction and keeping up with non-traditional reference activities. (Banks 2008)

Ryan's study of 6959 reference desk transactions found that a low percentage, 11% can be classified as research, 89% can be answered by non-librarians, namely students and other staff, 59% were answered through the librarians knowledge and 35% without consulting a source. The cost of each reference transaction was \$7.09. This brought into question the cost effectiveness of the reference desk.

Ryan also reviewed a series of approaches to providing reference or alternative service models that include the traditional reference desk staffed only by professional librarians, a tiered or Brandeis University model with the reference desk staffed with a combination of paraprofessionals and students and on-call librarians as needed (John Hopkins University); the one information desk with a combination of staff Northwest Missouri State University), the team approach with a circulation staff member and a librarian to handle in depth reference work. Some libraries have moved from a reference desk to mobile information stations or kiosks (University of Florida). By eliminating the reference desk, librarians are available for research consultation to provide one-on-one assistance, develop instructional content for websites, evaluate databases, explore virtual reference services, blogs, social networking and expand information literacy across the campus (University of Arizona). (Ryan 2008)

A review of the literature from 1984 to 2007, highlights several studies that review how reference service has been challenged as a result of technology, shifts in information seeking behavior, and the limited availability of money and human resources. Known as the "reference reform" period, librarians recognized the need for making reference service relevant and effective in a time of change and uncertainty. (Carlin 2007)

Libraries are experimenting with different service models and that the roles and responsibilities of librarians need to be considered in light of the changing information environment in areas such as

instruction and providing virtual services. The need for librarians is to come up with new ways of communicating and helping users at their point of need. (Carlin 2007)

Technology is the cause and will continue to be the cause of change in reference service. There are new realities or paradigms for reference planning: the means of providing information must change, quality service to a few must be chosen over open mediocre services, instruction in the use of information must be central to the core curriculum, and librarians must make the electronic library a reality. (Carlin 2007)

The need for changes in reference services is justified by looking at changes in the environment. The library user has been influenced by technology and expects to get help and information anytime and anywhere and does not expect that finding information might be difficult. Libraries should try to adapt their services to meet and anticipate needs and expectations. (Carlin 2007) The impetus for changes in libraries comes from technology, students learning styles (digital natives), and emphasis on cooperative learning. The concept of "Commons" emerged from the "Library as Place" and became the catalyst for libraries to stay relevant and but also be seen as innovative and flexible. Developing a Commons meant changing the way the reference desk is presented and used as well as other issues related to space design, staff training and funding. (Steiner 2009)

Three levels of Commons have emerged with a new type of space designed to organize workspaces and services around a digital environment. The physical commons with technology, resources, tools for students and staff to support students; the virtual commons with an online environment as gateway to electronic resources and the cultural commons as a social and cultural arena, shared knowledge, and creative expression in the digital age. (Beagle 2006)

The physical commons and more commonly known as the Information Commons encompasses traditional library services, varied resources, productivity software, promotion of collaborative learning, emphasizing a continuum of services, but remaining "library-centric" while supporting the institutional mission.

The virtual or Learning Commons includes all the elements of the Information Commons plus writing centers, collaborative workspaces and student learning in relation to the space. The Learning Commons is integrated with the library and the institution and enacts the institution's mission. It's a place that maximizes learning, writing, research and the use of technology. (Steiner 2009)

The issues in establishing the Learning Commons focus on the transformation of the collection from print to electronic, the Internet, electronic journals, Google and the Web. Others include the changing demographics of students with a broad range of learning styles who mix academic and social activities; educational trends that emphasize collaboration and group study, students being taught differently and the need to support student learning. More recently there is off-site and virtual collaboration by students in coffee shops, book stories and dormitories; digital advances with computers, cell phones, IPods, social networking, websites and Internet access to resources. The extension of the Library as Place includes coffee shops, cafes, wireless networks, extended late night hours, informal seating areas, group study rooms, liberal food and drink policies with both quiet and noisy areas.

Despite these challenges the Library is the central location where new information technologies, combined with resources in a user-focused, service-rich environment that supports today's social and educational patterns of learning, teaching and research. This model of service is student centered and founded in the adaptation to changing student habits and needs, evolutions in technology and collaboration. It is guided by 5 principles: open, free, comfortable, inspiring, and practical and characterized by workspaces in clusters, movable tables and flexible configurations. (Steiner 2009)

Other issues to emerge in implementing the Learning Commons include the hesitation of acceptance by staff who see it as not in keeping with the traditional role of the library and librarians not having knowledge of productivity software and electronic resources. There is the redefining of staff roles, training, assigning paraprofessionals, collaborating with offices and departments, extended hours that require cross training, cost of additional technology, social software, food service and modifying spaces and queues for workstations when demands can't be met. There was even concern about alienating graduate students who prefer quiet study spaces and others who felt that collaborative models and social software are a passing phase. (Steiner 2009)

Implementation of the Learning Commons means adaptation of library operations. Integrating the reference desk with technical support has changed its traditional role. Merging of reference and circulation desks or establishing multiple service desks and change in the number and level of staffing to include paraprofessionals, student assistants and computer lab technicians are evident. The result is a change in the type and number of reference questions and librarians spending more time in classrooms teaching and in consultation.

Institutions that have successfully implemented the Learning Commons include Colorado State University, The University of Tennessee, The University of Guelph (Canada), The University of Massachusetts (Amherst).

The University of Massachusetts, Amherst Learning Commons is a place where students engage in study, research, writing, collaboration and socialization 24 hours a day, 5 days a week. On the first level students find circulation services, an information desk for campus, building and directional questions and a café. On the 2nd level are the writing center, offices of academic advising and career services, the Learning Commons and Technical Support desk. The latter are staff by the Library and Office of Information Technology and the Reference and Research Assistance Desk. Communication is maintained between service points through email, a blog and meetings so students approaching any desk can have basic questions answered immediately or be referred to experts at another location within the facility. This is a network of on-demand, in-person services. (Fitzpatrick 2008)

The RRAD is staffed only by reference librarians. Student assistants and other library staff have moved to the Technical Support Desk and other areas of the Learning Commons. Reference librarians are active in providing off-desk reference services through email, blogs, instant message, a Chat service (OCLC Question Point, liaison reference librarian office hours in academic departments, personal contacts resulting from liaison and instruction activities and research consultations. However, they remain committed to providing expert, face-to-face, on-demand research help as well. When the RRAD is closed, the Library Commons and Technical Support staff get users started with basic search of the catalog and database locator while making referrals to a reference librarian. (Fitzpatrick 2008)

Brache recommends developing new service and staffing models for mediated information services. Four goals essential to strategic planning include analyzing to improve the effectiveness and cost efficiency of library information processes, developing criteria for measuring and assessing reference services, assessing the current model against the criteria developed and developing a plan for a comprehensive model for information and reference services (Brache 2008)

A structured problem solving approach (DMAIC) define, measure, analyze, implement, control with data collection was used to implement the model. Data approaches included question logging, surveying customer perspective, analyzing cost of service and questions asked. Data found that 95% of questions were answered by students and non-trained librarians. 5 items did best and 5 items needed improvement. The Action Gap item requiring the most attention was help in finding a computer when the Information Commons is full. Cost analysis revealed that to save costs subject librarians at the reference desk needed to be reduced.

The recommended model was a combined reference and circulation desk with staff trained to do reference through shadowing and observations and hiring of more temporary, half time paraprofessionals for extended hours. To replace an haphazard system when the reference desk could not answer questions or help users, an upgraded electronic referral system by Oracle was initiated to refer questions to nontraditional sites and subject specialists. Chat reference expanded reference hours by librarians, reduced weekly costs, and enabled librarians to be free to work on professional and other tasks to provide collection management, instruction and provide reference to a specific group, but not tied to a specific department or function.

The benefits realized were savings in time and cost. Chat reference tripled and served more customers, paraprofessionals took on more challenging work, librarians were freed to do professional work, online reference statistics collection eliminated data entry work, online reference system provided accurate data on referrals and response time, the Information Commons reduced the number of hours at the reference desk for librarians, librarian's knowledge increased, there was more information about user perception and an overall improvement in communication and services. The outcomes of the new model provided training to staff, personal involvement and commitment, more contact with instructors and more class instruction, and willingness to take on new projects.

The new model resulted in a curriculum training program with subject specific modules over 6 weeks. The training was based on questions asked and were characterized by outcomes, interactive activities, measurable assessments, role playing, hand-on activities, importance of the reference interview, using resources and shadowing.

Davidson surmised that reference is outdated due to the limited number of hours the desk is staffed, students work and study at night usually after 10:00 p.m., access is limited to those who come to the library, students wait in line for help and good service is dependent on customer satisfaction regardless of how delivered. The library at the University of California, Meced, presents a model for reference service that forgoes a desk staffed with reference librarians. The reference desk is replaced by service points staffed by library student assistants and paraprofessionals who check out laptops, process ILL, make referrals to librarians, and a text messaging service.

The features of the virtual reference service includes single service points, on-call librarians, referral of questions, use of paging devices, social networking tools, roving reference, instructional engagement and personalized service. The change is based on library values in which improving accessibility to resources through environments that are easy to navigate and discoverable is important; communication that is asynchronous and reaches many users through tutorials, FAQs email, multiuser forms and 24/7 Chat; service that reflects current technology, information and diversity of users; offsite access to resources, librarians that function as experts and problem solves that deliver just in time service, not just in case. New ways to provide reference services is to connect with librarians, by phone, email, text messaging, and web based forms. Instruction to classes is followed by appointments for individualized research support. Meet user needs where they are, at home, on campus, in the library or other locations. With instant messaging student assistants can see who is available and refer to more than one librarian simultaneously, roving reference can be facilitated with a laptop, and mobile phone. (Davidson 2009)

Steiner predicts that positive results of Commons in academic libraries hold promise for Commons 2.0 with a one-stop shopping mode for research, writing and collaboration with wireless communication, flexible work spaces, clusters to promote interaction, comfortable furnishings, support for peer learning, production and presentation software, audio and video editing, art and self-help graphics and color imaging.

Libraries with commons have endless possibilities to create partnerships with other campus units to provide integrated services. They will have multifunctional spaces, librarians with more technological skills, reference provided on an on-call basis and virtual elements for delivery of services.

An example of the possibilities is the Athenaeum at Goucher College (Baltimore):

The Athenaeum will be an intellectual nerve center, with a new technologically superior library at its core. Outside the library's doors, a spacious open forum will serve as a focal point for performances, public discussions, and other events. Adjoining these central elements will be a café, an art gallery, a center for the college's community service and multicultural affairs programming a private space for commuter students, and spaces for exercise, conversation, and quiet reflection and relaxation.

www.goucher.eedu/x17081.xml

Evaluation of Reference Services

Rimland evaluated in-person reference services by contrasting unobtrusive and obtrusive measures. A 1980s study of unobtrusive and obtrusive methods of evaluation of reference services introduced the 55% reference accuracy rule which still continues. However, ways to measure quality have been used in libraries ex examining the behavioral and interpersonal aspects of reference.

Unobtrusive methods measure the reference transaction based on the accuracy of the answer given by the staff member. Participants consent to be tested usually through a user survey. This is limited assessment of one factor and is prone to bias or a response based on what is expected, not what one feels. (Rimland 2007)

The "Willingness to Return" approach was an unobtrusive test to measure the willingness of the patron to return to the same staff member for help at a later time. The measure level for effectiveness of the reference transaction for unobtrusive measures is a 60% success rate. Indicators or model of practice used in the study include: walking users to resources, pointing out resources, instructing users on how to find information, negotiating questions, and follow-up with patrons.

MLIS students were used as proxies to ask library staff a set of questions and found 4 themes: a lack of identifying cues by which to identify librarians, not negotiating the questions, search failure following unmonitored referrals and a lack of follow-up questions. Proxies, focus groups and questionnaires focused on aspects of the quality interactions, namely, user needs and expectation, the reference environment and staff morale and workload. The study found that students want more than correct answers and seek point-of-need instruction. Patrons also appreciated librarians that are approachable and ask follow-up questions. Users must feel comfortable to approach the reference desk. Eye contact, proximity of the person, and body orientation are indicators of approachability.

The Wisconsin-Ohio Reference Evaluation Program (WOREP) continues to be a trusted measure for reference success. Measures are from the perspective of both the user and library staff. A transaction is considered successful when users found exactly what they wanted, were satisfied with the encounter, and didn't indicate any dissatisfaction. Success and satisfaction are related measures. WOREP separates ratings the measures, uses standard questionnaires and provides a shared database to compare results. (Rimland 2007)

Rimland's review found that behaviors like being approachable, walking the patron to find resources, improving interview skills and following up with patrons after the encounter are vital to the success of the reference transaction. New methods are needed to investigate the nonverbal communication aspects of the reference transaction using videotape that could also be used for training purposes.

In the 1990s evaluation of reference service was based on behavior of the librarian namely, interpersonal skills, timeliness of the response, and effectiveness of resources. The concern was with the efficiency of the process, clarity of procedure and staff training. The primary method of gathering data and statistics focused on what librarians did through counting. In time this was not a reliable basis for comparison and could not measure the quality of the interaction. (Logan 2009)

In the 2000s digital reference provided new ways of evaluating the reference transaction. Interest shifted to outcomes of the transaction and user satisfaction. The purpose of evaluation became how reference instills lifelong learning and contributes to information competency.

The influx of the Internet and virtual reference services have introduced variables that require adoption of a set of values to measure with flexible criteria for good service. Logan suggests that individual programs should develop their own list of qualities of good reference service that include behavioral characteristics (attitude, ability to communicate and approachability), knowledge of resources and collections and reference skills (the ability to discern appropriate level of help, when to refer, use of resources, time limitations, interviewing techniques, relevance, accuracy, perspective and bias). There is no ideal measuring tool. (Logan 2009)

The assessment of Commons in academic libraries shows positive results. Door counts are high but they do not tell if use is library-specific, that is for use of computers or study spaces. There is

need to implement ongoing summative (snapshot of how things look) and formative (ongoing process to refine and improve) evaluation. Steiner identified 6 types of evaluation that can be used in combination: 1) quantitative (statistics, data, head counts); 2) qualitative (observations, usability studies, focus groups) 3) formal (surveys, focus groups, LibQual) 4) informal (observations, surveys, reservations, logins), 5) explicit (designed for a specific institution, 6) implicit (standardized instruments) (Steiner 2009).

With no standardization of assessment and evaluation of commons libraries have employed a variety of methods that include embedded surveys in workstations, comment cards, student feedback, in-class evaluations, end-of-semester feedback, web hits and survey data.

The goal is to develop an assessment process that can provide insight into the current state of services and identify areas for improvement. (Steiner 2009)

In a virtual environment the reference transaction and its evaluation may be mediated through email, chat, videoconferencing, VOIP and instant messaging with follow-up via telephone, fax or email. Users and librarians employ computers or other Internet technology to communicate without being physically present. (Nilsen 2006)

A survey at the University of Western Ontario found that responders used email more often than chat. Chat refers to all real-time, synchronous services including instant messaging and email refers to the email to ask and answer references questions (not regular email). The survey revealed helpful and unhelpful feature of virtual reference. Chat is synchronous and easy to navigate to/from the home page, there is immediate presence of a librarian, acknowledgement of the question, immediate gathering of resources, and opportunity to react to the question and answer provided. There is opportunity to gather data about the user and conduct a reference interview. Chat presents environmental barriers when there are log times or not certain if the librarian is connected. Comments may be followed by silence or there is a long wait for a response while resources are searched. There may be unmonitored referrals or an abrupt termination due to time constraints or frustration with the transaction. The librarian may make faulty assumptions about the location of the user and recommend visiting the library when the distance of the user is unknown and may not explain the sources. Chat is affected by the type of question asked and may be more time consuming for the librarian.

Email enables the librarian to respond with a personal greeting, acknowledge user by name, reflect upon and write out the question, gather information that meets the user's need, respond in a timely manner and provide follow up with additional emails. Email presents environmental barriers if there is limited information on the home page, no forms to complete, multiple menus, uncertainty if the question was received. Email Is not conducive to a reference interview and without a form to completed information about the user is limited. There is uncertainty that the question was answered directly or that unmonitored referrals and URL sites will work.

Chat and email may not be considered reference in the true sense. Academic or research questions are difficult to answer, communication problems occur and it is cumbersome to type everything. Written messages lack nonverbal cues and tone. Email forms are not informative, they lack prompts to elicit information or have open ended interactions. Chat provides speed but may lack quality of information.

Virtual reference requires that the technology is working and the home page provides adequate instructions and guidance for use. (Nilsen 2006)

An evaluation of the Reference and Research Assistance Desk in the Learning Commons of the University of Massachusetts (Amherst) sought to assesses it the model met the needs of the users, identify the characteristics of the questions, satisfaction with the model and librarians perceptions of the advantages and disadvantages of the model.

The survey found that 89% of the respondents preferred face-to-face interactions though they were willing to try chat, email and telephone. The ability to call the desk from the stacks was particular helpful. 79% expressed interest in having the librarian hold office hours for consultation in the academic department. Within the library respondents preferred to approach the desk rather than have the librarian approach them. 44% supported having librarians rove the floor, but focus groups expressed concern about privacy and interruptions. Focus groups stated that the answers sought were received and they valued the research process provided during the reference interaction. Some participants expressed a desire for training in the learning process. Librarians agreed that adequate staffing is required to make the RRAD model work. (Fitzpatrick 2008

The survey found that 67% of the questions were for help with research and 30% for known item lookups and citation styles. Most questions were neither directional nor technical. Focus groups revealed expectations for the length of the reference interaction from 15 minutes to 1 minutes but acknowledged satisfaction of working with a reference librarian to get help.

39% of students in the Learning Commons visited the RRAD when they needed help with research while others said they preferred to use instant messaging, chat or email. Results showed that there is need to offset the perception that the RRAD is a frightening place. Focus groups found that both the Technical Services Desk and the RRAD were easy to find because of signage but found the TS staff to be younger, less formal, less patient and "techy" and the RRAd staff to be older,, quieter and more official looking" Focus groups indicated they would come back to the RRAd for help, found the librarians to be friendly and valued the teaching aspect of the interaction. There was general satisfaction with the level of research provided. (Fitzpatrick 2008)

Librarians found advantages of the RRAD to be the increase in quality of services, the elimination of the need to train students and its clarified identify to provide expert research help. Librarians valued the elimination of distracting technical questions giving them time to do reference, work another library and share information. The RRAD model fosters collaboration.

The most often mentioned disadvantage of the RRAD was the fact that referrals to other desks slows down the user. Librarians who worked a single-staffed shift found in an unevenness in the workflow with covering IM, chat, email and telephone follow-up and quiet times to complete other work. (Fitzpatick 2008)

An examination of the complexity of reference transactions and found that questions reflect a variety of levels and categories that can define approaches to reference services. 82 % of questions can be managed by a computer literate person with training in productivity software or some knowledge beyond general computer use including programming, software, installations and administrative logins. The remaining questions required some degree of analysis or diagnosis to determine why the software or hardware is not working. (Wong 2010)

An analysis of the answers revealed that 14.5% of the questions were given direct answers with no demonstration required, 50% required some skilled based demonstration. 29% required a

strategy based demonstration such as setting up the WiFi and 7% were other uncommon questions.

From the analysis Wong identified key competencies and service skills for support staff in an information or learning commons setting. The service skills emphasize good communication skills to understand the user's questions, a willingness to initiate a dialog or diagnosis, the ability to analyze and identify cause of problems, evaluate resources and knowledge required to answer questions, and to distinguish when a question should be referred to a reference librarian or technician.

Wong concludes that a robust referral system with targeted referrals be initiated with a defined set of FAQs for paraprofessionals, creation of a list of core resources that paraprofessionals should be familiar with, a list of tasks that are manageable by a paraprofessional and an agreed time frame for answering questions. He recommends moving to an integrated model of 1 paraprofessional and 1 librarian for reference service.

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Survey of Reference & Information Service Sites: Public Services Division

I. Service Desk	Art	Architecture	Chemistry	EPSL	McK/SIRS	PAL	PAL/Lowens Room	Shady Gro
1. Information/reference/circulation desk	No report	No report	combined	combined	separate	combined	separate	separat
2. # staff computers on service desk for info transactions	No report	No report	3	3	4	3	1	1
3. Is this sufficient?	No report	No report	Yes	Yes	Usually	Yes	Yes	No
	_	1	T		T .	T	T	1
II. Hours & Staffing	Art	Architecture	Chemistry	EPSL	McK/SIRS	PAL	PAL/Lowens Room	Shady Gro
What days and times do you have staff assigned to work on your service desk?	No report	No report	All the times the library is open	All the times & days the library is open	All the times & days the library is open	All the times & days the library is open	Monday-Friday 10 AM-5 pm SCPA staff ON- Call for our service desk	Mon-Thu 10 7pm Fri 10 5pm
2. Who is assigned to be at the service desk during these hours? (s=student staff; p=paraprofessionals; l=librarians)								
Monday-Friday daytime	No report	No report	Not reported	s, p, l	s, p, l	S	s, p, l	I
Monday-Friday evening	No report	No report	Not reported	s, p (M-W)	s, p, l	S		
Saturday daytime	No report	No report	Not reported	s, p	s, l	S		
Saturday evening	No report	No report	Not reported	s, p	s, p	S		
Sunday daytime	No report	No report	Not reported	s, p	s, l	S		
Sunday evening	No report	No report	Not reported	s, p	s, p	S		
Note: PAL schedules paraprofessional to fill holes in the schedule								
3. What is the <i>average number</i> of service staff on the desk at the following times:								
Monday-Friday daytime	No report	No report	1.5	3	3	2	1	1
Monday-Friday evening	No report	No report	1.5	2	2	2		1
Saturday daytime	No report	No report	1.5	3	2	2		
Saturday evening	No report	No report	1.5	3	2	2		
Sunday daytime	No report	No report	1.5	3	2	2		
Sunday evening	No report	No report	1.5	3	2	2		
Note1: EPSL expressed interest in having IT support on site Note2: PAL expressed interest in having								

computer and copying support expertise on site

III. Nature of Reference Services	Art	Architecture	Chemistry	EPSL	McK/SIRS	PAL	PAL/Lowens Room	Shady Gro
1. What types of information/reference services are available at your <i>service desk</i> ? And who is trained to provide the service (s=student staff; p=paraprofessionals; l=librarians		_						
Walk-in	No report	No report	I	s, p, l	s, p, l	s, p, l	s, p, l	
Telephone	No report	No report	I	s, p, l	s, p, l	s, p, l	p,l	
AskUsNow! Chat	No report	No report						
IM	No report	No report		grad s, p, l				
Other: Sites commonly use handouts and research guides prepared by librarians				Has Text messaging, QR codes throughout the library			Has customized web forms handled by curators and paraprofessionals	
2. How is in depth reference handled in your library?	No report	No report	Not reported	librarians office, by appointment, email, regular weekly office hours at the School of Public Health	Info Desk, librarian offices, by appointment, email	Librarian can be called at service desk, librarian offices, by appointment, email, questions often come in directly to librarians	At service desk, librarian offices, by appointment, telephone, email	At service desk, librarian offices, by appointme
3. Other types of services provided at your service sites and who generally provides those services (s=student staff; paraprofessionals; l=librarians)			,					
Technical support	No report	No report						
Printing	No report	No report		s, p, l	s, p, l	s, p		S
Copying	No report	No report		s, p, l	s, p	s, p	s, p, l	S
Software	No report	No report	I	p, l	s, p	s, p, l		р
Other								
Lost and Found	No report	No report		s, p	s, p, l	s, p		
Signing out keys to other sites	No report	No report		p, l	s, p, l	S		
Special permission borrowing	No report	No report		1	p, l	I	s, p, l	р
Circulation	No report	No report		s, p, l		S		s, p

Chemistry reports that desk handles course reserves, ordering materials for course reserve

EPSL reports also: calculators, help with scanners, microform reader scanner, projector, retrieval from on site storage

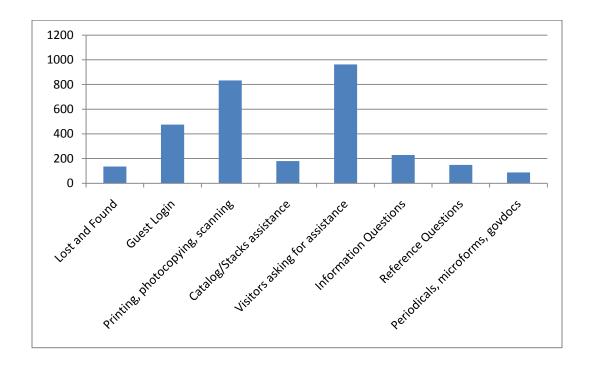
PAL/Lowens Room also reports collection (archival retrieval) and administration

Shady Grove reports all non-reference queries are handled at the Circulation Desk.

What Questions Are Users Asking at the McKeldin Information Desk? Summer 2011 Survey

In summer 2011 a survey was conducted to better understand the nature of questions and inquiries asked at the McKeldin Information Desk. All staff at the McKeldin Information Desk was involved in this survey. The questions and the dates of this survey are below. As is evident by this sampling of queries, there are more questions regarding lost and found, printing, directions etc., than there are reference questions that require the expertise of a librarian; the following data supports this.

Lost and Found	136
Guest Login	475
Printing, photocopying, scanning	833
Catalog/Stacks assistance	180
Visitors asking for assistance	962
Information Questions	229
Reference Questions	149
Periodicals, microforms, govdocs	88
Total	3052





What questions are users asking us at the McKeldin Library Information Desk? Summer 2011

Created: May 25 2011, 9:36 AM Last Modified: August 24 2011, 12:37 PM Design Theme: Gray Pin Stripe Language: English Button Options: Custom: Start Survey: "Start Survey! Disable Browser "Back" Button: False	" Submit: "Submit"			
What questions are users asking us at the McKeldin I	ibrary Information I	Desk? Summer 2	011	
Page 1 - Question 1 - Choice - One Answer (Drop Dov	vn)			
Tell us who you are:				
StaffStudentLibrarian				
Page 1 - Question 2 - Date and Time				
Indicate Your Desk Shift Enter the date and time when your shift begins and e E.g. Start: June 22, 2011, 10:00e.g. End: June 22, 201			ur clock.	
	Month	Day	Year	Time
	Month	,		
Start	Worth	,		
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		,		
End	vn)			

Study of the Libraries' Information and Research Services

O 14 O 15
Page 1 - Question 4 - Choice - One Answer (Drop Down)
Guest Login Approximately how many questions did users ask you about guest login while serving on the desk?
O 0
O 1
O 2 O 3
\bigcirc 3 \bigcirc 4
O 5
O 6
O 7
O 8
○ 9
O 10
O 11
O 12
O 13
O 14 O 15
Page 1 Question F. Chaice, One Anguer (Dran Down)
Page 1 - Question 5 - Choice - One Answer (Drop Down) Printing & Photocopying & Scanning
Approximately how many questions did users ask you about printing, copying and/or scanning while serving on the desk? These questions can include:
E.g. how do I print? E.g. how do make a photocopy? E.g. how do I scan? e.g. How do I purchase a copy card and add money to it? E.g. Can I use my I.D. card to print? to copy? E.g. my print job won't come out, help! E.g. the printer is out of paper or might be jammed. E.g. how much does it cost to print in B&W? in color?
E.g. how do I print? E.g. how do make a photocopy? E.g. how do I scan? e.g. How do I purchase a copy card and add money to it? E.g. Can I use my I.D. card to print? to copy? E.g. my print job won't come out, help! E.g. the printer is out of paper or might be jammed. E.g. how much does it cost to print in B&W? in color?
e.g. how do I print? E.g. how do make a photocopy? E.g. how do I scan? e.g. How do I purchase a copy card and add money to it? E.g. Can I use my I.D. card to print? to copy? E.g. my print job won't come out, help! E.g. the printer is out of paper or might be jammed. E.g. how much does it cost to print in B&W? in color? O O 1
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e.g. how do I print? E.g. how do make a photocopy? E.g. how do I scan? e.g. How do I purchase a copy card and add money to it? E.g. Can I use my I.D. card to print? to copy? E.g. my print job won't come out, help! E.g. the printer is out of paper or might be jammed. E.g. how much does it cost to print in B&W? in color? O 1 2 3 4
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questions can include: E.g. how do I print? E.g. how do make a photocopy? E.g. how do I scan? e.g. How do I purchase a copy card and add money to it? E.g. Can I use my I.D. card to print? to copy? E.g. my print job won't come out, help! E.g. the printer is out of paper or might be jammed. E.g. how much does it cost to print in B&W? in color? O 1 2 3 4 5 6
questions can include: E.g. how do I print? E.g. how do make a photocopy? E.g. how do I scan? e.g. How do I purchase a copy card and add money to it? E.g. Can I use my I.D. card to print? to copy? E.g. my print job won't come out, help! E.g. the printer is out of paper or might be jammed. E.g. how much does it cost to print in B&W? in color? O O 1 2 3 4 5 6 7
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E.g. how do I print? E.g. how do make a photocopy? E.g. how do I scan? e.g. How do I purchase a copy card and add money to it? E.g. Can I use my I.D. card to print? to copy? E.g. my print job won't come out, help! E.g. the printer is out of paper or might be jammed. E.g. how much does it cost to print in B&W? in color? O 1 2 3 4 5 6 7 8 9
e.g. how do I print? E.g. how do make a photocopy? E.g. how do I scan? e.g. How do I purchase a copy card and add money to it? E.g. Can I use my I.D. card to print? to copy? E.g. my print job won't come out, help! E.g. the printer is out of paper or might be jammed. E.g. how much does it cost to print in B&W? in color? O 1 2 3 4 5 6 7 8 9 10
questions can include: E.g. how do I print? E.g. how do make a photocopy? E.g. how do I scan? e.g. How do I purchase a copy card and add money to it? E.g. Can I use my I.D. card to print? to copy? E.g. my print job won't come out, help! E.g. the printer is out of paper or might be jammed. E.g. how much does it cost to print in B&W? in color? O 1 2 3 4 5 6 7 8 9 10 11
e.g. how do I print? E.g. how do make a photocopy? E.g. how do I scan? e.g. How do I purchase a copy card and add money to it? E.g. Can I use my I.D. card to print? to copy? E.g. my print job won't come out, help! E.g. the printer is out of paper or might be jammed. E.g. how much does it cost to print in B&W? in color? O 1 2 3 4 5 6 7 8 9 10

O 15
Page 1 - Question 6 - Open Ended - Comments Box
Catalog, Stacks/Folio, E-Books, In-Process Items What specific questions did users ask about using the catalog while you were serving on the desk? Record both phone call & inperson transactions. These questions may include: E.g. does the library have any books on management case studies? E.g. what floor do I go to that have books with call number? E.g. can you help me? I can't figure out how to open the e-book I need. E.g. the catalog says this book is "in process." Can I still get it? E.g. I went up to the stacks and couldn't find this book. Is it checked out?
Page 1 - Question 7 - Choice - One Answer (Drop Down)
Visitors (UMUC, etc.)
Approximately how many visitors asked for assistance while you were serving on the desk? Include both phone and in-person
transactions.
O 0 O 1
O 3
0 4
O 5
O 6
O 7
O 8
O 10
O 11
O 12
O 13
O 14
O 15
Page 1 - Question 8 - Open Ended - Comments Box
Information Questions What information questions did users ask you while you were serving on the desk? Please enter all the questions users asked you while serving on the desk. Details are important for this survey. Record both phone and in-person transactions. E.g. where do I find a campus building, a lab, the bathroom, etc? E.g. where is the stapler? E.g. when does the library close? E.g. Can I have a marker & eraser? White off? Post-it note? E.g. I'm not a UM student. Can I use a computer? E.g. where would I find the microfilm reader?

Page 1 - Question 9 - Open Ended - Comments Box
Reference Questions What reference questions did users ask you while you were serving on the desk? Please enter all the questions asked you while serving on the desk. Details are important for this survey. Record both phone and in-person transactions. E.g. I need to find articles on global warming, where do I start? E.g. how can I find statistics on U.S. trade to China? E.g. what database should I use to find dissertations? E.g. what search terms do I use? I can't find many books on 'green architecture.'
Page 1 - Question 10 - Open Ended - Comments Box Periodicals, Microforms, Government Documents
What questions did users ask you while serving on the desk about on-site assistance with periodicals? Microfiche? Government documents including GIS?
Page 1 - Question 11 - Open Ended - Comments Box
Comments Do you have any comments you'd like to share?
Page 1 - Heading
Thank you for your participation!
Thank You Page
Thank you for completing the survey! http://www.lib.umd.edu/PUBSERV/reference.html
Screen Out Page
Standard
Over Quota Page
Standard Standard
Survey Closed Page
Standard

Sampling Days for McKeldin Library Information Desk Survey

Summer 2011

June 2011								
Sun	Mon	Tue	Wed	Thu	Fri	Sat		
			1	2	3	4		
5	6	7	8	9	10	11		
12	13	14	15	16	17	18		
19	20	21	22	23	24	25		
26	27	28	29	30				

July 2011								
Sun	Mon	Tue	Wed	Thu	Fri	Sat		
					1	2		
3	4	5	6	7	8	9		
10	11	12	13	14	15	16		
17	18	19	20	21	22	23		
24	25	26	27	28	29	30		
31								

August 2011						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Sampling Date

McKeldin Closed