Emerging Trends in Facilities, Services, and Resources Usage Patterns in Academic Libraries:
An Annotated Bibliography

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Introduction and Scope

This annotated bibliography focused on emerging trends on how academic libraries handled issues relating to facility design, resource allocation, and service management. Articles focused on facility design and examined the increased role of the library as study space with one article discussing traffic patterns. Resource articles included print versus electronic collection usage and web-based tutorials. Service articles primarily addressed electronic reference activities and its impact. Since this annotated bibliography addressed emerging trends in academic libraries, all the articles supplied date from 2005-2011.

Description

The rapid evolution of digital information technology forced academic libraries to examine and redefine their role in relation to the facilities, resources, and services supplied in order to remain relevant in the ever-changing digital age. Recent studies have demonstrated that academic libraries’ primary purpose has transitioned from research facility to study and collaboration center. This changed emphasis necessitated a fundamental redesign of library space allocation. Interrelated to facility design was the nature and type of resources libraries supply. Increasingly, academic libraries transitioned their collections from print to digital which posed serious implications for the role of physical libraries going forward. In an attempt to remain relevant in the Google age, many libraries are experimenting with electronic reference services which are experiencing mixed adoption rates.
Summary of Findings

The digital revolution significantly impacted the role of academic libraries by decreasing its utility as an “information retrieval” facility to one where non-library activities such as studying and computer access serve as the primary use of library space (Applegate, 2009). Applegate (2009) found that studying constituted the primary activity that occurred in academic libraries and asserted that facility designs must incorporate more space for individual and collaborative studying such as carrels, tables, and group study rooms. Webb et al. (2008) found that a large proportion of library activity at the University of Dayton consisted of individual and group study. Individual study resources, such as study carrels and comfortable chairs, enjoyed the highest activity rate while tables experienced less activity than anticipated (Webb et al., 2008). Xia (2005) found private studying constituted a majority of activity but found that tables were occupied more frequently than study carrels. While this data may appear to contradict the Webb et al. (2008) study, Xia (2005) noted that while tables experienced high usage rates, their actual occupancy levels typically were low. Xia (2005) found that tables were frequently used for individual study and expressed concern that while tables were popular, their usage patterns constituted an inefficient use of limited physical space.

In addition to the academic library as study space, Webb et al. (2008) found that computer facilities enjoyed high activity rates despite the University of Dayton’s requirement that all students purchase their own notebook. Van Beynen et al. (2010) found that the computer commons area constituted the most heavily trafficked and utilized portion of the University of South Florida – St. Petersburg library.

These evolving facility usage patterns raised significant questions as to how academic libraries should handle the physical and electronic resources and services provided. Kimball et
al. (2009) discussed the wide-spread adoption of electronic databases for article research and examined how the digital transition impacted the adoption of e-books. The researchers examined demand for popular scientific e-books as compared to their print counterparts using access and circulation statistics and found the electronic versions enjoy higher use rate by several multiples. (Kimball et al, 2009). However, Wagner (2007) noted most library activity involved browsing a variety of resources of which only a few received serious examination by the patron. Electronic resources counted each access transaction while print rates may exclude a host of in-house research and browsing activity (Wagner, 2007). Wagner (2007) found that counting “abandoned” books in the library demonstrated that print usage typically was higher than reported and that for certain subject areas, such as nursing which has many large books, actual print usage went underreported.

Textbooks represented another resource concern for many academic libraries. Many students used library facilities for reading textbooks (Applegate, 2009). However, Pollitz et al. (2009) argued that soaring textbook costs translated into increased demand for textbooks on physical reserve. However, many libraries significantly curtailed their physical course reserves even as demand for reserve textbooks increased (Pollitz et al, 2009). Pollitz et al. (2009) argued that libraries can remain relevant by supplying physical copies of in-demand textbooks for their physical reserve.

Many academic libraries faced with these logistical issues began offering resources and services online often with mixed results. Somoza-Fernandez & Abadel (2009) examined 180 academic library web-based tutorials and determined that the generalized scope, beginner-level material, and poor interface usability and accessibility of many resources significantly diminished their value.
Cocciolo (2010) explored how the Teachers College at Columbia University handled the high demand for study space which outstripped the library’s physical resources. Columbia created and heavily marketed virtual collaboration spaces to address a lack of group study rooms (Cocciolo, 2010). Despite the intense marketing and numerous web tools, the virtual collaborative space remained underutilized (Cocciolo, 2010).

Online reference services have received the greatest push while returning mediocre results. Banks & Pracht (2008) discovered the trend towards decreased in-person reference activity resulted in libraries increasingly using unsupervised, non-ALA accredited library workers to handle reference questions. Despite this staffing trend, Desai & Graves (2008) indicated that in-person and virtual reference enjoy comparably high levels of reference librarian instruction. In response to declining in-person reference statistics, Strothmann et al. (2009) examined whether academic libraries promoted online reference tools at the expense of in-person reference. However, the study concluded that libraries favored promotion of remote contact reference services, online and telephone reference, on their website over in-person reference activities (Strothmann et al, 2009). An emerging trend in reference activity centered on online reference services. Arnold & Kaske (2005) found that online reference services, for example chat reference, provided the correct answer 92 percent of the time. However, Mu et al. (2011) asserted that while online reference services generally enjoy high regard, actual activity lagged behind expectations. Mu et al. (2011) examined whether the library’s visual presentation of online reference services impacted usage rate and concluded that textual, pictorial, and pop-up indicators did not lead to increased chat reference activity. Lewis (2008) found that most online reference activity is generated through the library’s website. However, creating additional access points through the University’s electronic resources can help increase transaction activity (Lewis,
New York University experimented with text-message reference and found that most activity that occurred originated inside the library despite access to in-person reference services (Pearce, 2009). In a follow-up study, Pearce et al. (2010) determined that while text-messaging offered the potential for synchronous and asynchronous reference activities, response times favored text-messaging as an asynchronous communication tool for directional and ready reference questions.

Bibliography

Entry 1:

Abstract: “Systematic observation of non-computer seating areas in library and non-library spaces on an urban campus showed an important role for the library in individual and group study area choices. The study provides data on important points to consider in library design, including laptop needs and gender preferences.” [ABSTRACT FROM AUTHOR]

Annotation: This article provides useful discussion concerning the expanded role of academic libraries beyond mere “information retrieval.” It examines the need for redefining library space into one that provides students with space to conduct non-library activities such as checking email and reading textbooks. Redefining the library’s role has an impact on facility design. This includes adding more group study areas, providing more private study areas, and adding more carrels. The author studied student behavior and concluded that the library’s resources were primarily used for studying, not information retrieval. The results suggest that academic libraries should devote more facility space and resources to providing students a location where they can study individually or collaboratively.

Authority: *Ulrichsweb* described the *Journal of Academic Librarianship* as an academic/scholarly journal and indicates that it has been peer reviewed. The LISTA database entry for this article indicates that, at the time of publication, Professor Appelgate was an Assistant Professor at the Indiana University School of Library and Information Science. The University’s website confirms that she continues to hold this position. The Web of Science record indicates she has written ten published papers and that the article has been cited twice since its publication in 2009.

Search Strategy: For information relating to academic libraries, LISTA likely would retrieve many relevant articles. I began my search by consulting the thesaurus for subject headings and
subheading relevant to the topic. I input “academic library” into the thesaurus “Browse” box and selected the “Relevancy Ranked” option. I decided to conduct a broad search of several related academic library topics and selected those listed in the search string. I decided to narrow the results by limiting the search to academic journals. I further refined the search by limiting the results to publications which would contain articles relevant to the topic. These journals were, “Journal of Academic Librarianship,” “Journal of Library Administration,” “Collection Management,” and College & Research Libraries.” I viewed the result for this article and read the abstract. Upon confirming its usefulness, I selected “Get It” “Drexel Full Text.” I retrieved the full text article from “Library Literature & Information Science” and downloaded the PDF version.

**Database:** Library, Information Science & Technology Abstracts (LISTA)

**Method of Searching:** Browsing and controlled vocabulary

**Search String:** (DE "ACADEMIC libraries -- Evaluation") OR (DE "ACADEMIC libraries -- Off-campus services" OR DE "ACADEMIC libraries -- Space utilization" OR DE "ACADEMIC libraries -- Collection development" OR DE "ACADEMIC libraries -- Electronic reserve collections" OR DE "ACADEMIC libraries -- Quality control" OR DE "ACADEMIC libraries -- Reserve collections" OR DE "ACADEMIC libraries -- Services to Hispanic Americans" OR DE "ACADEMIC libraries -- Services to minorities")

**Entry 2:**


**Abstract:** “A quantitative study of a university chat reference service (online synchronous) addresses the following research questions: (1) What types of questions are being asked? (2) Who is asking the questions of the service? and (3) Did the customers get correct answers to their questions? All the transcripts (351) from January through August 2002 were examined, yielding 419 questions that were analyzed. The relationships among accuracy of answers, types of questions, and customer groupings were analyzed. Correct answers occurred 91.72 percent overall, with a wide range between question types. Analysis by types of questions posed from different customer groupings is provided, along with changes made and planned for the chat service. (Contains 7 figures, 7 tables and 15 notes.)”

**Annotation:** This article examined real librarian and user chat reference transcripts to determine whether the fifty-five percent rule for correct reference answers held true in the virtual reference environment. Unlike similar studies where librarians or library students posed as dummy users who asked predetermined questions, the researchers examined chat reference transcripts from actual users of the University of Maryland’s service. The paper provides useful charts concerning type of question asked, user group that asked question (i.e. student, faculty, staff), how the question was handled, and if the question was answered correctly. The researchers found the roughly ninety-two percent of chat reference questions were answered correctly,
although only sixty-seven percent of research questions were answered correctly. This study demonstrated that real users of chat reference services received the correct answer more than the fifty-five percent figure typically cited.

**Authority:** Ulrichsweb described *Libraries and the Academy* as an academic/scholarly journal which has been refereed. According to the university’s website, both authors are employed by the University of Maryland. Prof. Kaske holds a PhD and Web of Science indicated he has authored seventeen papers. Ms. Arnold serves as a course manager and is responsible for all student, faculty, and staff reference questions and has authored three articles. This article has been cited seventeen times.

**Search Strategy:** The search strategy began by consulting the ERIC thesaurus in Dialog to identify relevant descriptors. The descriptors “academic libraries” and “reference services” were selected. In order to retrieve only journal articles, the document type limiter “journal” was used. These terms were combined using the Boolean operator “and.” The abstracts for retrieved results were reviewed for relevance. The article’s full-text version was retrieved through the Drexel library website by selecting the article from the relevant journal’s volume and number.

**Database:** Dialog File 1 [Educational Resources Information Center (ERIC)]

**Method of Searching:** Controlled vocabulary

**Search String:** s academic()libraries/de and reference()services/de and dt=journal

**Entry 3:**


**Abstract:** “The article examines trends in reference desk staffing in academic libraries. It discusses increased emphasis on developing Web-based reference services, focus on the Internet, and a decreased number of questions asked at physical reference desks. A survey was sent to academic libraries asking about the number of reference desks in the library building, the number of questions asked at the reference desk, the staffing of the desk, and the use of non-degreed library employees at the reference desk. Particular focus is given to the use of reference staffing by library employees who do not hold a Masters degree in Library and Information Science.”

**Annotation:** The researchers surveyed a sample of midsized academic libraries to ascertain current trends in reference desk usage and staffing. Respondents noted a general trend towards a decreased number of in-person reference questions. While staffing size remained largely unaffected, there existed an increased usage of non-MLS degree holders working unsupervised at the reference desk. Libraries using unsupervised non-MLS degreed personnel tended to have no more than one reference librarian on call and inadequate procedures for handling patron questions that could not be answered by the non-degreed personnel. This article provided
several useful tables and discussion relating to the reasons and use of non-ALA accredited workers at the reference desk.

**Authority:** The LISTA search query restricted results to peer-reviewed publications only which indicated that *Reference & User Services Quarterly* was a scholarly journal. At the time of publication, the authors both worked as professors at Southeast Missouri State University. Ms. Banks has authored six library-focused articles while Mr. Pracht has been published twice. The article has been cited four times since publication.

**Search Strategy:** For information relating to academic libraries, LISTA likely would retrieve many relevant articles. I began my search by consulting the thesaurus for subject headings and subheading relevant to the topic. I input “academic library” into the thesaurus “Browse” box and selected “ACADEMIC libraries – Reference Services.” I restricted the results to “Scholarly (Peer Reviewed) Journals.” I viewed the result for this article and read the abstract. Upon confirming its usefulness, I selected the “PDF Full Text” retrieval option.

**Database:** Library, Information Science & Technology Abstracts (LISTA)

**Method of Searching:** Browsing and controlled vocabulary

**Search String:** DE "ACADEMIC libraries -- Reference services" and “Refine Your Results” “Scholarly (Peer Reviewed) Journals.”

**Entry 4:**


**Abstract:** “Purpose - The purpose of this paper is to investigate whether virtual space can be used to alleviate physical space constraints for group collaboration in an urban academic library environment. Specifically, this paper looks to uncover whether library users will turn to library-provided virtual space when there is a scarcity of physical space.

Design/methodology/approach - This project discusses the design of the physical and virtual environment, and then measures the use of this environment quantitatively over a 47-month period (2005-2009).

Findings - Results indicate that physical spaces for group collaboration are in very high demand, whereas virtual ones are not. A scarcity of physical collaboration spaces does not lead users to library-provided virtual space, but rather to work around the scarcity in the physical world.

Originality/value - The paper highlights the value of the library as a gathering place and the ways in which virtual collaboration space cannot easily take the place of physical collaboration space.”

**Annotation:** Physical space constraints at urban universities limit the availability of real world collaboration facilities. The Teachers College at Columbia University implemented and heavily marketed a virtual collaboration space where students could meet using a suite of electronic collaboration software. Despite the marketing campaign and severe limitations on physical
space availability, this study found that the virtual collaboration space was used infrequently while demand for physical space remained high. These results suggested limitations on physical resources may not lead to patron adoption of electronic services.

**Authority:** The official *Library Hi Tech* website indicated that it is a peer-reviewed, scholarly publication. Prof. Cocciolo possesses an EdD from Columbia University, is an Assistant Professor at Pratt Institute School of Information and Library Science and previously worked as the Head of Technology at the Gottesman Libraries at Teachers College, Columbia University. The author published two articles in 2010.

**Search Strategy:** The author of another article, Rachel Applegate (“Applegate R*” as “author”) was used in Web of Science as the basis for a “related records” search. I selected the result for this article and read the abstract. Upon confirming its usefulness, I selected “Get It” “Drexel Full Text.” I retrieved the full text article from “ABI/INFORM Complete” and downloaded the PDF version.

**Database:** Web of Science (WoS)

**Method of Searching:** Author search and browsing

**Search String:** “Applegate R*” in author field. Selected “Related Records.”

**Entry 5:**


**Abstract:** “This article considers the teaching role of reference librarians by studying the teachable moment in reference transactions, and users’ response to that instruction. An empirical study of instruction was conducted in both virtual and traditional reference milieus, examining the following three services: Instant messaging (IM), chat, and face-to-face reference. The authors used the same criteria in separate studies of all three services to determine if librarians provided analogous levels of instruction and what factors influenced the likelihood of instruction. Methodologies employed included transcript analysis, observation, and patron surveys. Findings indicated that patrons wanted instruction in their reference transactions, regardless of medium, and that librarians provided it. But instructional techniques used by librarians in virtual reference differ somewhat from those used at the reference desk. The authors conclude that reference transactions, in any medium, represent the patron’s point-of-need, thereby presenting the ideal teachable moment.” [ABSTRACT FROM AUTHOR]

**Annotation:** This study compared virtual and in-person reference transactions to determine whether the reference medium impacted the user instructional component of the reference transaction. Results indicated that no discernable difference existed between mediums regarding reference librarians’ willingness to provide instruction and users interest in receiving it. Both mediums surveyed indicated high levels of reference librarian instruction and patron satisfaction.
with these services (well above ninety percent). These results may indicate a bias in the reference resources and data collection tools used. However, the results section provided a detailed breakdown and discussion of the results obtained so that readers can draw their own conclusions concerning the data.

**Authority:** The search query restricted results to peer-reviewed publications only which indicated that *Reference & User Services Quarterly* was a scholarly journal. According to the article’s biography and the university’s website, Ms. Desai works a Reference and Instruction Librarian at the University of New Mexico, Albuquerque and has published four articles with several previous ones receiving multiple citations. Ms. Graves served as a Humanities Reference Librarian at Southern Illinois University, Carbondale and has authored three articles. This particular article has been cited once.

**Search Strategy:** For information relating to academic libraries, LISTA likely would retrieve many relevant articles. I began my search by consulting the thesaurus for subject headings and subheading relevant to the topic. I input “academic library” into the thesaurus “Browse” box and selected “ACADEMIC libraries – Reference Services.” I restricted the results to “Scholarly (Peer Reviewed) Journals.” I viewed the result for this article and read the abstract. Upon confirming its usefulness, I selected the “PDF Full Text” retrieval option.

**Database:** Library, Information Science & Technology Abstracts (LISTA)

**Method of Searching:** Browsing and controlled vocabulary

**Search String:** DE "ACADEMIC libraries -- Reference services" and “Refine Your Results” “Scholarly (Peer Reviewed) Journals.”

**Entry 6:**


**Abstract:** “This paper aims to analyse the characteristics of tutorials created by academic libraries. It evaluates a sample of 180 tutorials by applying thirty basic indicators referring to general characteristics, content, teaching methodology, usability and technology. The general conclusion is that most of the tutorials are at an early stage of development.”

**Annotation:** The authors examined Texas A&M University’s most frequently used scientific books to determine if e-book usage statistics merited an increase in acquisition. The study acknowledged the limited comparability of e-book and print statistics since each e-book access is recorded even if the use is *de minimus* while difficulty existed in tracking in-house print material usage. Despite these limitations, the authors found significantly higher e-book usage of popular scientific books as compared to its print counterparts.
Authority: Ulrichsweb described the Journal of Academic Librarianship as an academic/scholarly journal which has been refereed. According to the Texas A&M website, Mr. Kimball serves as the school’s Science and Engineering Librarian and six of his articles have been published. Gary Ives serves as the University’s Coordinator of Electronic Resources with five published articles. Kathy Jackson holds a PhD in Education Administration and serves as a Science and Engineering Librarian.

Search String: (DE "ACADEMIC libraries -- Evaluation") OR (DE "ACADEMIC libraries -- Off-campus services" OR DE "ACADEMIC libraries -- Space utilization" OR DE "ACADEMIC libraries -- Collection development" OR DE "ACADEMIC libraries -- Electronic reserve collections" OR DE "ACADEMIC libraries -- Quality control" OR DE "ACADEMIC libraries -- Reserve collections" OR DE "ACADEMIC libraries -- Services to Hispanic Americans" OR DE "ACADEMIC libraries -- Services to minorities")

Database: Library, Information Science & Technology Abstracts (LISTA)

Method of Searching: Browsing and controlled vocabulary

Search Strategy: For information relating to academic libraries, LISTA likely would retrieve many relevant articles. I began my search by consulting the thesaurus for subject headings and subheading relevant to the topic. I input “academic library” into the thesaurus “Browse” box and selected the “Relevancy Ranked” option. I decided to conduct a broad search of several related academic library topics and selected those listed in the search string. I decided to narrow the results by limiting the search to academic journals. I further refined the search by limiting the results to publications which would contain articles relevant to the topic. These journals were, “Journal of Academic Librarianship,” “Journal of Library Administration,” “Collection Management,” and College & Research Libraries.” I viewed the result for this article and read the abstract. Upon confirming its usefulness, I selected “Get It” “Drexel Full Text.” I retrieved the full text article from “Library Literature & Information Science” and downloaded the PDF version.

Entry 7:


Abstract: “Purpose -- The purpose of this paper is to show how an academic library added access points to its digital reference service outside its traditional library web pages (e.g. online catalog, subscription databases). It seeks to determine whether, how, and to what extent these access points were used by patrons. Design/methodology/approach -- Almost 1,200 chat, e-mail, and instant message digital reference transactions were examined. The data collected included: status of user; format by which questions were submitted (chat, e-mail, IIM); subject area of the question; type of question, and the access point from which the patron submitted the question. The data were analyzed using SPSS statistical software. Findings -- Patrons used the access points in external resources over 25 per cent of the time. They took advantage of the access
points as their research needs arose. An increase in the amount of reference transactions received was observed after the addition of the external access points. Practical implications -- This study may be useful in planning, administering, and staffing digital reference services. Originality/value -- This is currently the only comprehensive study that has examined digital reference transactions in multiple formats, the correlation between access point and information need, and the impact of adding access points to digital reference in external resources.”

[ABSTRACT FROM AUTHOR]

Annotation: Researchers examined whether the marketing email and chat reference at multiple access points throughout the University of Illinois at Chicago increased usage. The library supplied links to their online reference resources through the library’s website, online catalog, electronic databases, and BlackBoard. The results indicated an overwhelming majority of online reference transactions originated from the library’s website (73.7 percent). The online catalog and electronic databases accounted for most of the remaining transactions with BlackBoard responsible for only two percent of online reference transactions. This article provided many useful charts delineating the use of different access points and the types of questions handled through each point.

Authority: The search query restricted results to peer-reviewed publications only which indicated that Reference Services Review was a scholarly journal. An internet search for Ms. Lewis revealed that she is currently Coordinator of Information Literacy and Reference at Temple University and that she has authored three articles related to this subject. Ms. De Groote has published ten articles relating to general and medical librarianship.

Search Strategy: For information relating to academic libraries, LISTA likely would retrieve many relevant articles. I began my search by consulting the thesaurus for subject headings and subheading relevant to the topic. I input “academic library” into the thesaurus “Browse” box and selected “ACADEMIC libraries – Reference Services.” I restricted the results to “Scholarly (Peer Reviewed) Journals.” I viewed the result for this article and read the abstract. Upon confirming its usefulness, I selected “Get It” “Drexel Full Text” and retrieved the article from “Publisher via CrossRef.”

Database: Library, Information Science & Technology Abstracts (LISTA)

Method of Searching: Browsing and controlled vocabulary

Search String: DE "ACADEMIC libraries -- Reference services" and “Refine Your Results” “Scholarly (Peer Reviewed) Journals.”

Entry 8:

Abstract: “Virtual Reference Services (VRS) have high user satisfaction. The main problem is its low usage. We surveyed 100 academic library web sites to understand how VRS are presented. We then conducted a usability study to further test an active VRS model regarding its effectiveness.”

Annotation: One hundred academic libraries were surveyed to determine if visual presentation of online reference resource access points improved utilization. Researchers determined that visual presentation of online resources was not a significant factor relating to increased usage. The article provided many useful charts that compared text, graphical, and pop-up presentation styles to reference transaction figures. The authors noted a psychological component relating to online resource activities and suggested that establishing a human connection was more important than visual presentation for increased online reference activity.

Authority: Ulrichsweb described the Journal of Academic Librarianship as an academic/scholarly journal which has been refereed. According the university website, all authors are currently associated with the University of Wisconsin-Milwaukee. Prof. Dimitroff holds a PhD in Information and Library Studies and has published nineteen articles. Prof. Mu holds a PhD in Library and Information Science has published four articles. Ms. Jordan authored two articles. Since the article was published only a few months ago, there has been insufficient time for it to be cited.

Search Strategy: The search strategy began by consulting the ERIC thesaurus in Dialog to identify relevant descriptors. The descriptors “academic libraries” and “reference services” were selected. In order to retrieve only journal articles, the document type limiter “journal” was used. These terms were combined using the Boolean operator “and.” There abstracts for retrieved results were reviewed for relevance. The article’s full-text version was retrieved through the Drexel library website by selecting the article from the relevant volume and number for the given journal.

Database: Dialog File 1 [Educational Resources Information Center (ERIC)]

Method of Searching: Controlled vocabulary

Search String: s academic()libraries/de and reference()services/de and dt=journal

Entry 9:


Abstract: “The New York University's Libraries text message reference service is two and a half years old. As a pilot project, NYU librarians used a dedicated mobile device to provide the text service before transitioning to LibraryH3lp's Android SMS gateway. The service is described as neither synchronous nor asynchronous. Having analyzed many of the transcripts generated by the
service, NYU librarians have learned that patrons frequently send texts from within the library and engage in conversations of varying length and duration.” [ABSTRACT FROM AUTHOR]

**Annotation:** Academic libraries, such as New York University, have experimented with text-messaging to answer reference questions. The study found that many text-message reference users sent their questions from within the library even when in-person reference was directly accessible. These transactions tended to favor a conversational tone. Depending on the response time, text-messaging served as a synchronous and asynchronous means for reference transactions. Overall, this study provided useful analysis of text-message reference work, but there could be more discussion about the results and less time focused on providing background information.

**Authority:** The search query restricted results to peer-reviewed publications only which indicated that *Reference Librarian* was a scholarly journal. According the school website, Ms. Pearce serves as the Librarian for Journalism, Music, and Culture at New York University. While she has published several articles, which were observed in footnotes, ascertaining a precise number proved difficult because of gaps in Web of Science’s author coverage.

**Search Strategy:** For information relating to academic libraries, LISTA likely would retrieve many relevant articles. I began my search by consulting the thesaurus for subject headings and subheading relevant to the topic. I input “academic library” into the thesaurus “Browse” box and selected “ACADEMIC libraries – Reference Services.” I restricted the results to “Scholarly (Peer Reviewed) Journals.” I viewed the result for this article and read the abstract. Upon confirming its usefulness, I selected “Get It” “Drexel Full Text” and retrieved the article from “Informaworld Journals.”

**Database:** Library, Information Science & Technology Abstracts (LISTA)

**Method of Searching:** Browsing and controlled vocabulary

**Search String:** DE "ACADEMIC libraries -- Reference services" and “Refine Your Results” “Scholarly (Peer Reviewed) Journals.”

**Entry 10:**


**Abstract:** “Purpose - This paper seeks to create an empirical framework for SMS reference services so that libraries may develop a greater understanding of how this service operates and how it may be improved. Design/methodology/approach - The paper conducted a quantitative analysis of 577 SMS transactions, representing 628 reference questions, received during the 2008-2009 academic year. Each transaction was coded by type of question, transaction length in messages or "events," and transaction duration in time. Findings - SMS transactions exhibit a higher than expected degree of variability in total number of events, duration and content.
Overall, duration of transaction averaged 4.34 hours, and number of events per transaction averaged 3.79. Calculating separately for those transactions that contained a reference query - which comprises 40 percent of the total questions received - noticeably altered the results. The duration of reference queries averaged 4.85 hours, while the number of events averaged 4.65. Where reference queries occurred there was a high incidence of user expressions of gratitude, regardless of duration or number of events exchanged. These results support the conclusion that users do not expect a purely synchronous service, though faster response time and thoroughness of answer do show a relationship with higher user satisfaction. Originality/value - Many of the findings of the study challenge currently held assumptions and impressions regarding the nature and potential of SMS reference services in academic libraries.” [ABSTRACT FROM AUTHOR]

Annotation: Follow-up to the Pearce (2009) study which examined text-message transaction duration and question type. The results indicated that text-message transactions proved less synchronous than previously indicated with the average reference transaction taking more than two hours to complete. Results indicated a higher incidence of directional versus reference questions asked via text-message as compared to the reference desk. Text-messaging tended to favor short ready reference questions, but included more consuming reference questions as well. This article included a more detailed discussion of the text-messaging data than the Pearce (2009) article, but analyzed a different data segment. The researchers presented the data in easy to understand charts. This article is valuable since the literature relating to text-message services is scarce and it helps to better define the usefulness and limitations of text-message reference.

Authority: The search query restricted results to peer-reviewed publications only which indicated that Reference Services Review was a scholarly journal. According to the New York University website, Ms. Pearce serves as the Librarian for Journalism, Music, and Culture. Mr. Collard currently works as the Librarian for Education and Linguistics at NYU. These two authors have been previously published as was observed in unrelated articles’ footnotes. However, ascertaining a precise number proved difficult because of gaps in Web of Science’s author coverage. Kara Whatley currently works as the Life Sciences Librarian at NYU.

Search Strategy: For information relating to academic libraries, LISTA likely would retrieve many relevant articles. I began my search by consulting the thesaurus for subject headings and subheading relevant to the topic. I input “academic library” into the thesaurus “Browse” box and selected “ACADEMIC libraries – Reference Services.” I restricted the results to “Scholarly (Peer Reviewed) Journals.” I viewed the result for this article and read the abstract. Upon confirming its usefulness, I selected “Get It” “Drexel Full Text” and retrieved the article from “Publisher via CrossRef.”

Database: Library, Information Science & Technology Abstracts (LISTA)

Method of Searching: Browsing and controlled vocabulary

Search String: DE "ACADEMIC libraries -- Reference services" and “Refine Your Results” “Scholarly (Peer Reviewed) Journals.”
Entry 11:


**Abstract:** “Students at U.S. colleges and universities are concerned about the high cost of textbooks. Expansion of library course reserves has been suggested as one solution to this problem. The authors surveyed libraries at public universities to explore the status and management of physical course reserves and the role they play vis-a-vis textbook affordability. Both size and circulation of physical course reserve collections are declining. Despite a large growth in the use of electronic reserves, physical reserves play a significant role in providing textbooks for recommended reading lists. Physical course reserves represent a safety valve for students looking for ways to pay for college in an environment of ever-increasing textbook costs. (Contains 5 figures.)”

**Annotation:** This study examined 196 large enrollment universities to ascertain the viability for libraries to provide student access to current textbooks through the physical course reserve. Since most articles over the past decade focused on e-reserves rather than physical reserves, this article addressed a topical issue which not currently researched. The article examined the problem in the context of textbook affordability for students and explored physical reserves in the age of e-reserves. The results indicated that many large universities no longer maintain large physical reserves with many collections containing less than 2,000 books. When textbooks were placed on reserve, they tended to be recommended rather than required textbooks. Overall, the presentation, charts, and graphs provide a clear, logical structure describing the figures and contents of current physical collections.

**Authority:** *Ulrichsweb* described *Journal of Access Services* as an academic/scholarly journal which has been refereed. Cheryl Middleton has published five articles and, according to the school’s website, serves as the Head of Instruction and User Services at Oregon State University. John Pollitz has published two articles and, according to the University of Wisconsin-Eau Claire website, serves as the Library Director. Anne Christie has published three articles and, according the school’s website, currently works as BioSciences Librarian at the University of Alaska Fairbanks.

**Search Strategy:** The search strategy began by consulting the ERIC thesaurus in Dialog to identify relevant descriptors. The descriptors “academic libraries” and “library materials” were selected. In order to retrieve only journal articles, the document type limiter “journal” was used. These terms were combined using the Boolean operator “and.” There abstracts for retrieved results were reviewed for relevance. Since Drexel did not carry the *Journal of Access Services*, I retrieved a physical copy from the University of Pennsylvania’s Van Pelt-Dietrich Library.

**Database:** Dialog File 1 [Educational Resources Information Center (ERIC)]

**Method of Searching:** Controlled vocabulary
Search String: s academic()libraries/de and library()materials/de and dt=journal

Entry 12:


Abstract: “This paper aims to analyse the characteristics of tutorials created by academic libraries. It evaluates a sample of 180 tutorials by applying thirty basic indicators referring to general characteristics, content, teaching methodology, usability and technology. The general conclusion is that most of the tutorials are at an early stage of development.”

Annotation: This study analyzed the components of several hundred web-based tutorials offered by academic libraries. The two largest categories of web-based tutorials focused on “Information Literacy” and “Searching in Information Resources.” The results indicated that many tutorials provided only general instruction and did not offer different instructional tools for beginning and advanced users. Additionally, these resources rated poorly in accessibility and usability. Overall, the article does an effective job delineating the different components of web-based tutorials studied. It provided charts and graphs which clearly illustrated the project’s design and the data’s logical relationship.

Authority: Ulrichsweb described the *Journal of Academic Librarianship* as an academic/scholarly journal which has been refereed. Prof. Abadal has published ten articles and, according to the University of Barcelona’s website, is a doctor of “Librarianship and Documentation.” Ms. Somoza-Fernandez has published four scholarly articles and the University of Barcelona’s website indicates she is “Faculty of Library and Documentation.”

Search Strategy: For information relating to academic libraries, LISTA likely would retrieve many relevant articles. I began my search by consulting the thesaurus for subject headings and subheading relevant to the topic. I input “academic library” into the thesaurus “Browse” box and selected the “Relevancy Ranked” option. I decided to conduct a broad search of several related academic library topics and selected those listed in the search string. I decided to narrow the results by limiting the search to academic journals. I further refined the search by limiting the results to publications which would contain articles relevant to the topic. These journals were, “Journal of Academic Librarianship,” “Journal of Library Administration,” “Collection Management,” and College & Research Libraries.” I viewed the result for this article and read the abstract. Upon confirming its usefulness, I selected “Get It” “Drexel Full Text.” I retrieved the full text article from “Library Literature & Information Science” and downloaded the PDF version.

Database: Library, Information Science & Technology Abstracts (LISTA)

Method of Searching: Browsing and controlled vocabulary
Entry 13:


Abstract: “A library's web site is a virtual “front door” to its services and collections. Libraries can use their “Ask a Librarian” pages to promote reference services and to inform patrons about the different options available. Much variation is found in the naming of those pages and the number and type of reference contact options they include. This article reports the results of an examination of the reference assistance pages of libraries that are members of the Association of Research Libraries. In particular, the study attempted to determine whether virtual modes of reference service are being promoted at the expense of traditional options.” [ABSTRACT FROM AUTHOR]

Annotation: The researchers examined whether ARL university libraries promoted the online reference services at the expense of traditional reference activities. An examination of the “Ask a Librarian” feature on these websites indicated a high promotion of remote contact services such as email, chat, and telephone over in-person references and consultation. The article provides a detailed literature review relating to online reference services which supplied considerable context for this study’s relevance. The authors’ results presentation included multiple, intellectually accessible charts that detailed the “Ask a Librarian” data collected.

Authority: The search query restricted results to peer-reviewed publications only which indicated that *Reference Librarian* was a scholarly journal. According to the school’s website, all three authors work at the University of Oklahoma Libraries. Ms. Strothmann serves as a Social and Behavioral Sciences and Reference Librarian and has published three scholarly articles. Cheryl McCain is the Library Instruction Coordinator and has published two articles. Laurie Scrivener serves as the History and Area Studies and Reference Librarian and has published three articles.

Search Strategy: For information relating to academic libraries, LISTA likely would retrieve many relevant articles. I began my search by consulting the thesaurus for subject headings and subheading relevant to the topic. I input “academic library” into the thesaurus “Browse” box and selected “ACADEMIC libraries – Reference Services.” I restricted the results to “Scholarly (Peer Reviewed) Journals.” I viewed the result for this article and read the abstract. Upon confirming its usefulness, I selected the “PDF Full Text” option for retrieval.

Database: Library, Information Science & Technology Abstracts (LISTA)
Method of Searching: Browsing and controlled vocabulary

Search String: DE "ACADEMIC libraries -- Reference services" and “Refine Your Results”
“Scholarly (Peer Reviewed) Journals.”

Entry 14:


Abstract: “For a 1-year period, visitors to the Nelson Poynter Memorial Library, University of South Florida St. Petersburgh were observed regarding how they negotiated through the first floor and interacted with the library resources and educational displays. Pedestrian choice research was applied to the library to better understand visitor movement and facilitate greater interaction and engagement. To encourage greater interaction, future library design needs to strategize the high demand services and resources along the natural pathways and to the immediate library entrance, while remote locations should be redesigned as desirable destinations that provide high benefits to students and library visitors.”

Annotation: This article examined library traffic patterns at a midsized academic library to ascertain the most efficient placement of frequently used library resources. Observed traffic patterns indicated that the computer commons, reference desk, circulation desk, and stairwell were the most frequently used resources on the first floor. This study is useful since it indicated high-use resources and suggested solutions for how to efficiently position them in order to maximize positive traffic flow.

Authority: *Ulrichsweb* described the *Journal of Academic Librarianship* as an academic/scholarly journal which has been refereed. The first two authors work at the Nelson Poynter Memorial Library for the University of South Florida St. Petersburg. Ms. Van Beynen serves as the Reference and Instruction Librarian while Ms. Pettijohn handles Collection Development and Technical Services. Ms. Carrel manages Information Collection & Exchange for the Peace Corp. This is the authors’ first scholarly publication.

Search Strategy: The author of another article, Rachel Applegate (“Applegate R*” in “author”) was used as the basis for a Web of Science “related records” search. I selected the result for this article and read the abstract. Upon confirming its usefulness, I selected “Get It” “Drexel Full Text.” I retrieved the full text article from “Library Literature & Information Science Full Text” and downloaded the PDF version

Database: Web of Science (WoS)

Method of Searching: Author search and browsing

Entry 15:


Abstract: “Beyond collecting traditional circulation statistics, tracking in-house use of library materials is a significant measure of how patrons use our resources. In our pilot project, Lending Services staff members conducted nightly pick-ups of library materials left on tables, in carrels, in study rooms, as well as books cast aside in the stacks areas as patrons browsed the book stacks. We obtained a two week sample of these "abandoned" materials, quantifying the in-house use by our patrons while also counting the routine work of our Lending Services department. (Contains 5 figures.)”

Annotation: This study sought to quantify the in-house use of library print material in order to more accurately gauge the usage rate of its print collection. The study counted so-called “abandoned books” on shelves, tables, study carrels, etc. and determined that certain subject materials such as nursing were more prone to in-house reference activities and these figures were not completely represented in current use statistics. This article is relevant since evaluating a library print collection’s actual usage figures makes for a more accurate comparison when determining which resources to convert to electronic coverage only.

Authority: *Ulrichsweb* described *Journal of Access Services* as an academic/scholarly journal which has been refereed. Ms. Wagner worked as an Access Services Librarian, Head of Lending Services at William Paterson University’s library.

Search Strategy: The search strategy began by consulting the ERIC thesaurus in Dialog to identify relevant descriptors. The descriptors “academic libraries,” “library services” and “use studies” were selected. In order to retrieve only journal articles, the document type limiter “journal” was used. These terms were combined using the Boolean operator “and.” There abstracts for retrieved results were reviewed for relevance. Since Drexel did not carry the *Journal of Access Services*, I retrieved a physical copy from the University of Pennsylvania’s Van Pelt-Dietrich Library.

Database: Dialog File 1 [Educational Resources Information Center (ERIC)]

Method of Searching: Controlled vocabulary

Search String: s academic()libraries/de and library()services/de and use()studies/de and dt=journal
Entry 16:


**Abstract:** “The University of Dayton (UD) used a multi-method research approach to evaluate current space use in the library. A general campus survey on study spaces, online library surveys, a week-long video study, and data from the "National Survey of Student Engagement (NSSE)" were examined to understand student choices in library usage. Results suggest that although UD students prefer to study at times alone and at times with or near others, students used the UD library primarily to study alone. We determined that the following characteristics are important in considering student selection of group study spaces: spaces that are comfortable, spaces that facilitate interpersonal communication, spaces that they can control, and areas that promote the integration of basic human needs and desires (such as eating, drinking, and enjoyment) with learning activities. Library spaces have been reconfigured and redesigned to increase student selection of the library for group study. (Contains 2 tables, 2 charts and 29 notes.)”

**Annotation:** Researchers at the University of Dayton studied usage patterns of physical resources in their facility. The results indicated that soft furniture and computer stations were used at a much higher rate than anticipated. The computer usage data proved particularly interesting since the university required all students own a notebook computer. Study carrel use proved in line with expectations while table usage fell well below expected levels. This data supported the observations that a majority of students used the library for private study. Overall, this research is useful since it suggests that computer and individual study resources should receive greater design considerations than those related to group activities.

**Authority:** Ulrichsweb described *Libraries and the Academy* as an academic/scholarly journal which has been refereed. All authors are employed at the University of Dayton. Kathleen Webb currently holds the Dean of University Libraries position. Prof. Molly Schaller holds a PhD from Ohio University and has published sixteen times in educational-related fields. Prof. Sawyer Hunley received her PhD from the University of Cincinnati in School Psychology and has published eight psychology-related articles.

**Search Strategy:** The search strategy began by consulting the ERIC thesaurus in Dialog to identify relevant descriptors. The descriptors “academic libraries” and “library facilities” were selected. In order to retrieve only journal articles, the document type limiter “journal” was used. These terms were combined using the Boolean operator “and.” There abstracts for retrieved results were reviewed for relevance. The article’s full-text version was retrieved through the Drexel library website by selecting the article from the relevant volume and number for the given journal.

**Database:** Dialog File 1 [Educational Resources Information Center (ERIC)]

**Method of Searching:** Controlled vocabulary
**Search String:** s academic()libraries/de and library()facilities/de and dt=journal

**Entry 17:**


**Abstract:** “This research seeks to observe the occupancy of study areas in a university library over a period of several months with the aim of evaluating the efficiency of library resources usage. In undertaking the research, study facilities of a library, such as chairs, sofas, carrels, and tables were first drawn as features on maps using a GIS application. Geospatial databases were then created to store data of occupancy of the facilities by library users, which were observed by the author. On connecting records in the databases to features on the maps, GIS functions were explored to analyze observed data and exhibit the analytical results on maps. The findings of this research challenge the predominant opinion that insists that academic library users have a preference of study carrels over tables of studying. Instead, the research reveals that student users ten to select tables to study, especially tables equipped with electrical and Internet connections. At the same time group study rooms are welcomed.”

**Annotation:** This study examined the occupancy rates for study spaces, a subject area which had received little treatment, at the University of Arizona. Results indicated that tables were more frequently occupied than carrels. However, while tables experienced high usage, their actual occupancy rate, measured by how many individuals sat at the table, was quite low. So while tables proved extremely popular, they constituted a significant waste of study space. While the results were derived from one particular university, the occupancy level for tables appeared to be an important consideration in facility design.

**Authority:** The LISA search results were restricted to “Peer-Reviewed Journals” which indicates the article was published in an academic/scholarly journal. Prof. Xia has published eighteen articles and, according to the University of Arizona website, is an Assistant Professor of Library and Information Science and holds a PhD in Anthropology from the University of Arizona. This article has been cited six times.

**Search Strategy:** For information relating to academic libraries, LISA likely would retrieve many relevant articles. I began my search by consulting the thesaurus for descriptors relating to the topic. I located “academic library” in the thesaurus. I used the keywords “usage,” “facilit*” and “resource*” once I determined that none of them were descriptors and combined the terms with the “and” Boolean. I restricted the results to “Peer-Reviewed Journals.” I selected the result for this article and read the abstract. Upon confirming its usefulness, I selected “Get It” “Drexel Full Text.” I retrieved the full text article from “ABI/INFORM Complete” and downloaded the PDF version.

**Database:** Library & Information Science Abstracts (LISA)

**Method of Searching:** Controlled vocabulary and keyword
**Search String:** DE=(academic libraries) and KW=usage and KW=(facilit* or resource*)

**Conclusion and Personal Statement**

The digital transition left many academic libraries struggling to adapt their facilities, resources, and services to changing demands and preferences. This annotated bibliography illustrated that library space needs to be repurposed to reflect the decreased emphasis on physical research and increased importance of library as a place for study. Despite this focus on study, physical resources still play a role in effective library service. While many libraries are supplying resources and services electronically, patron adoption rates have lagged.

Overall, this annotated bibliography proved useful in identifying and providing context for several logistical issues faced by modern academic libraries. Constructing this paper provided an opportunity to see the interconnected nature of original research; how studies can support, expand, or contradict other people’s research. Assembling the collected articles allowed for intellectual connections to be made among topics that superficially appeared unrelated but in actually served to inform each other.

This project showed that useful research material can be located through a variety of search techniques such as controlled vocabulary, keyword, browsing, citation chasing, and authorship. The search process demonstrated that related databases can return many different articles for similar searches. While electronic databases offer many current full-text articles, not every useful article is available online and print collections are still a valuable information retrieval resource. Writing annotations demonstrated the difference between an article overview and a critical summation and evaluation of the material. In conclusion, I found the annotated
bibliography assignment provided useful insight into the structure, techniques, evaluation, assemblage, analysis, and general character of academic research.