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ABSTRACT
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designing a successful distance program in terms of learner support at a
distance. Before a library service can be developed, three questions need to
be answered: First, what are the expectations and needs of students and
faculty in online programs? Second, what kinds of library services are
critical to faculty and students in online programs? Finally, are these
expectations and needs met by the services offered? The purpose of this study
was to identify important library services for the Instructional Systems
Technology distance program at Indiana University, based on the needs and
expectations of students, faculty, librarians, and administrators. The
important library services for distance education were identified through a
review of the literature; interviews with students, faculty, librarians and
administrators; researchers' previous experiences; brainstorming; and
discussion with librarians. (Contains 11 references.) (AEF)

Making them work for the IST online program: A case study

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Abstract

Library service is one of the critical elements for designing a successful distance program in terms of learner support at a distance. Important services of the library model for the Instructional Systems Technology (IST) online program at Indiana University (IU) were identified, based on the needs of students, faculty, librarians, and administrators. Interviews and survey were major methods used in this study.

Introduction

Since higher education involves students in inquiry, research, and critical thinking, library accessibility and support play an important role in the success of distance education. According to Lebowitz (1997), library services to distant students include instruction in the use of libraries and library resources, contact information for requesting assistance from the library, information about requesting materials not available at local site libraries, quick turnaround time for materials requested from the library collection, quick response to requests for reference assistance and guidance, and quick response time to non-library related questions. Usually, the existing library services in traditional universities do not adequately meet the special needs of distance learning. Without equitable access to library resources and librarians, students at a distance cannot perform the same research functions as on-campus students, reducing their academic experience and creating frustration. Such stressful experience could be among the factors that cause a high dropout rate in distance education. As a result, many principles, guidelines, or services have been developed to ensure quality library service for the extraordinary growth of technology-mediated distance learning in higher education (Cooper, 1998).

To develop a quality library service for distance education, the users, the instructors and off-campus students, and the service providers, the librarians and administrators, should be involved. "Regardless of which model is developed and what variation used, it is imperative that institutions and librarians recognize that distance education/off-campus students are entitled to library services which are comparable to those available to on-campus students (Lebowitz, 1997)." To make sure that students at a distance have equal access to library resources, a program designer needs to better understand these students and try to meet their needs and expectations. In addition to students, a designer must consider and support the faculty, who are the key to making all materials alive. Moreover, developing effective library services for distant students is not just a library issue; it can never be tackled without the support of an institution's administrators. Therefore, before a quality library service can be developed, three questions need to be answered. First, what are the expectations and needs of students and faculty in online programs? Second, what kinds of library services are critical to faculty and students in online programs? Finally, are these expectations and needs met by the services offered?

The purpose of this study was to identify important library services for the IST distance program, based on the needs and expectation of students, faculty, librarians, and administrators. The important library services for distance education were identified through a review of the literature, interviews with students, faculty, librarians and administrators, researchers' previous experiences, brainstorming, and discussion with librarians.

Library Services for Distance Education

A literature review was conducted to compile a list of library services for distance education as a framework of this study. Guidelines for distance learning library services developed in 1998 by the Association of College and Research Libraries (ACRL), the nation's largest professional association for academic libraries, was reviewed, along with others suggested in various articles and publications (Brophy, 1997; Butler, 1997; Derlin & Edward, 1997; Jones, 1997; Kirk & Andrea, 1999; MacDougall, 1998; Niemi & Barbara, 1998; Tolsma, 1997). The authors also brainstormed in order to identify potential library services based on past experiences and observations. Considerable overlapping among services derived from these various sources were found and eliminated. Finally, library services for distance education were grouped into the following six categories:

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1. **Access to research materials.** The services in this category include online databases, online library catalogs, physical library collections (both at IU and on local sites), and reserve readings.
2. **Delivery of requested materials.** This category includes services for delivering requested materials from the library to a student via postal service, FAX, or various online delivery options.
3. **Instruction.** In order to identify and utilize appropriate library research resources and materials, distant students need librarians' instruction detailing those resources and procedures. Services in this category include providing instruction as part of a program orientation, face-to-face instruction, instruction by phone, online tutorials, and online asynchronous and synchronous instruction.
4. **Help.** While instruction covers more pre-formatted techniques and formal teaching or curriculum such as tutorials, spontaneous or specified questions are answered by "Help" services, which may take the form of lists to browse, FAQ's, or possibly a Knowledge Base. The services in this category related to assistance in identifying subject materials that students may need through the program, highlighting indexes and IST core journals, standard reference books within a discipline, assistance with reference formatting, search help specific to a discipline, and identifying and accessing local library resources.
5. **Policies and procedures.** Available library services, as well as services not provided, should be clearly defined in policies and procedures. Then distant students will know the availability of certain library services, the best way to use these services, and the correct channels of communication. This category includes handling requests from individuals outside the primary audience, referring requests that the library cannot handle to the most appropriate IU or other resource, limits on services, and any costs that students may incur.
6. **Faculty assistance.** Developing relationships and collaborative efforts with faculty will be a critical factor in the success of library services for distance education. This category includes providing faculty assistance on copyright issues and procedures, reserving materials, developing library instructional components, and updating news-and-notes type of current awareness publications.

Methods

Fourteen subjects were initially identified as interviewees based on their substantial experience, potential personal interests, or their involvement in distance education or the IST distance program. Two of these initial candidates, the Associate Vice President for Distributed Education and the Dean of University Libraries, were not interviewed due to time and scheduling constraints. However, administrative perspectives were still sustained by interviewing the Head of the IU Undergraduate Library. While there were minor variations in the questions asked of each interviewee, they typically centered on the following topics: 1) What do you think of when someone mentions a phrase like 'library services for distance/distributed education'? 2) For what type of assignments or information do you/your students/library users use the library? 3) How quickly should students expect a response or delivery of material from library services?

In addition to the interview questions, each interviewee completed a Likert-type scale to rate the importance of specific library services, as they would be applied to the online IST program. This survey instrument was designed to determine *how important* the services are to the institution's faculty, administrators, librarians, and students.

Results

From February through mid-April of 2000, the researchers interviewed each of participants. A list of open-ended questions was initially probed which led to free-thought discussion and, sometimes, brainstorming. The interviews themselves lasted anywhere from 25 minutes to nearly 2 hours. Clearly, some individuals had much to say and sparked some creative ideas. The survey and interview questions were also distributed via e-mail to two students who were not able to physically participate in the interview process because of distance constraints. In all, three faculty members, five librarians, one IST distance education committee member, and four students were interviewed and/or completed a survey, for a total of thirteen participants. Only twelve of these were given the final official survey.

As to open-ended questions, different interviewees repeatedly mentioned a number of issues. Since these comments were unsolicited and unprompted (coming before the survey listing specific services), these indicated commonly perceived essential needs.

Database access was one of the most frequently identified services. On several occasions, the ERIC database was specifically mentioned. Along with the necessity for students to access research databases, the issue of accessibility for students beyond the IU network domain was a concern. Traditionally, the databases purchased by

libraries have only been accessible on campus, while some are more strictly, available only inside libraries. Very recently the libraries have reached agreements with a number of database vendors to allow access to IU students not physically shown on campus.

Closely related to database/literature indexing and abstracting access, availability of full-text databases was repeatedly identified as a critical service. Several databases offered now through IU libraries do contain full-text/full-image inclusion linked to the indexing. The libraries also offer a handy utility for identifying specific journals that may contain full-text entries. An alternative method of offering full-text articles may be accomplished through scanning the materials held by the libraries. While providing the full-text of research items is highly important to student research, the hit-and-miss coverage currently available may create problems in distance learning. For instance, if students are only using items they can immediately obtain in full-text and forgoing the lengthy process of obtaining potentially more relevant and academic items only physically available in libraries, is the academic quality of their research suffering?

Reserve readings also surfaced repeatedly in discussions. Both students and faculty considered electronic reserves to be an essential library service for distance education. While the Indiana University-Purdue University at Indianapolis (IUPUI) Library has offered electronic reserves for several years, the IUB libraries have not yet initiated such a service. Reportedly, the libraries are exploring this with a hoped-for availability by August 2000.

Document delivery was another commonly cited necessary service. Whether through US postal delivery, fax, or online delivery options, interviewees recognized the necessity of having books, articles, or other library materials delivered upon request. It is still unclear exactly what services would be available to IST distant students. While the Library Distributed Education Services Web pages indicated that books and articles from the IU Libraries could be checked out and delivered to distant students free of charge (http://www.indiana.edu/~libdist/des.htm), the Distributed Education Librarian and Head of the Undergraduate Library contradictorily pointed out that books held by the IU libraries would not be delivered to off-campus students. IU libraries similarly would not loan books from other libraries for off-campus students; however, they would interlibrary loan articles from journals the IU libraries would not subscribe to for off-campus students.

Another theme repeatedly expressed by interviewees, and previously mentioned as prominent in the literature related to library services for distributed education, was that distant students should have access to library resources and services comparable to what students with physical access to the libraries would receive. An interesting side note, faculty and students mentioned this more often than did the librarians who were interviewed.

Access to librarians or library staff was another repeated theme. The reasons for contacting library staff may include requesting research assistance, obtaining a quick reference answer, initiating or asking about services, or even asking about other IU divisions or services beyond the library.

Closely related to the above issue regarding access, several librarians interviewed mentioned the necessity of providing a "hand-holding" service to users. Depending on additional student support services offered by IU, the library could well become the "friendly voice" that students seek out whenever they have questions and do not know where else to turn. Students will also need a high degree of personal assistance and attention as they struggle to use online databases or card catalogs, explore where they should look for different types of information, need advice on research topics, etc.

The final major finding from the open-ended questions focuses on the idea of responsiveness. Interviewees were asked a two-part question: (1) "How long should students have to wait for a response to an initial query?" and (2) "If the library will deliver materials directly to students, how quickly should the students expect to get those materials?" The answers showed an enormous range, from immediately to 72 hours for the first question and from immediately (if electronic) to two weeks for the second question. Popular answers for the first part were either immediate acknowledgement of receipt or responses within 24 hours. Popular answers for the second part were either delivery in two to three days or within five days.

In particular, It is necessary to point out the disparity between user expectations and the expectations of libraries. While answers from faculty and students generally indicated a shorter response time, the answers given by librarians tended toward the longer time frames. Distant students would particularly have a need for quick access to library materials and librarians' assistance. If the library services provided were not viewed as responsive, the perception of the service as a whole would have been degraded.

At the end of each interview, participants were asked to fill out a survey to rank their perception of the necessity of several services. The results have been tabulated and are attached as Table 1. Answers were given on a scale of one to five, one being of little relevance and five being highly relevant/critical. The averaged results speak for themselves, but here are some highlights from these findings.

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Table 1

	Mean
Access To Research Materials	
- Online Database	4.92
- Online Card Catalogs	4.42
- Physical Library Collection	4.08
- Materials From Other Libraries	3.75
Delivery of Requested Materials	
- Postal Service	4.08
- Fax	3.50
- Online Delivery Options	4.67
Instruction	
- Part of Program Orientation	4.33
- Face-to-Face Instruction	2.36
- Online Tutorials	4.42
- Online Asynchronous Help	4.42
- Online Synchronous Help	3.25
- Phone Help	4.75
Help	
- Highlighting Indexes and Core Journals	3.58
- Standard Reference Books w/in Discipline	3.83
- Search Help specific to Discipline	3.92
- Assistance w/ Reference Formatting	3.17
- Identifying and Accessing Local Library Resources	4.00
Policies and Procedures	
- Handling requests from students/others outside program	4.33
- Handling requests & referrals for services not provided	3.82
- Limits on Services Provided	4.67
- Pass-back costs	4.75
Faculty Assistance	
- Copyright Issues and Procedures	4.50
- Reserve Materials: Policies & Procedures	4.50
- Developing Library Instructional Components	4.25
- Library Update/News & Notes publication	3.67

Online database access (mean = 4.92) was regarded as highly critical. When options were available for delivery of materials, most preferred the ability to send or receive these through online venues (4.67). Several instructional methods were desirable for librarians to teach and to guide users in resources and procedures, but most respondents agreed that phone contact (4.75) was a necessary service to provide. While the policy and procedure questions focused more on helping library staff, the overall response indicated that users should be made aware of the limits (4.67) and pass-back costs (4.75) for services offered. Assisting faculty with policies and procedures regarding reserve readings (4.50) was rated highly. Several interviewees also looked to library services to provide guidance on matters of copyright (4.50).

Conclusions and Recommendations

This study tried to identify important library services for successful distance education. From the open-ended questions, different interviewees repeatedly offered a number of concerns. Since these comments were unsolicited and unprompted, these indicate commonly perceived essential needs. As previously stated, several library services deemed important or critical for distant students were identified through the literature review and brainstorming. Most notable of these themes was the overarching philosophy that library services for distant students should be comparable or equitable to the services provided to on-campus students (ACRL Guidelines, 1997; Lebowitz, 1997). As the Chair of the Middle States Accreditation Association stated, "there can be no real

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differences in the quality of library support on or off campus. If the same level of quality is to be maintained, comparable – not necessarily the same – library resources and services are imperative (Lebowitz, 1997)."

User Expectations

A second, and often overlooked, theme emerged that may prove critical to the continued success of library services for distance education, namely customer satisfaction based on user expectations. Libraries perceptions of user expectations often do not coincide with what the users themselves view as important. Based on a 1995 report by Edwards and Bourne, librarians "tend to emphasize empathy, tangibles, and customer/staff relationships. Yet, academic library users tend to attach greater importance to reliability and responsiveness (Cooper & Dempsey, 1998)." In order to be "successful" by user standards, library services will need to fully understand their users and user expectations and to exceed, not just meet, those expectations.

Access

Access to research resources (databases and library catalogs) and to research materials is of primary importance in the process of academic inquiry. Several resources are currently available. Several of these will improve in usability. More will undoubtedly follow. What is important at this stage is for library services to actively market these resources. Students and faculty need to be made aware of the best and most appropriate tools available to them. Faculties in turn need to make students aware of these resources and encourage their use for class assignments.

Delivery of materials

Information obtained on what materials are available to distant students and how they can be delivered is conflicting and somewhat confusing. Clear policies and procedures need to be established and disseminated so students will know what they are entitled to, what options are available for getting these materials, and how quickly they can expect them.

Instruction

Students will continue to seek assistance from librarians at the last minute. Flexible options for interaction and just-in-time instruction will need to be offered, particularly through phone contact and online options. However, students need to be made aware of the library services available to them, who to contact, and how to use library resources. The most effective way of exposing IST online students to the library service available to them is by inviting the Distributed Education librarian to give a presentation during their initial orientation sessions in order to introduce the service, explain the service available, and demonstrate some of the tools they will use fro research. With the intermediated web page to statement what service are available and how to access to the service, students can be remaindered what service are available, where and how to access later on during the semester.

Help

Several tutorials and guides are currently available on the IU libraries' Web pages. A searchable list of Frequently Asked Questions or equivalent Knowledge Base would also prove helpful. These may help students in getting connected to databases and started in their searches. However, these are geared to a more generic audience and may not answer specific questions IST students may have. The Distributed Education librarian has offered to develop specific help pages that can be geared to individual courses and linked from that course's Web pages. Given the current staffing shortage in her department, this is not a long-term option. A better alternative for IST students would be an intermediate Web site that offers advice for library research and appropriate resources.

Policies & Procedures

In order to avoid confusion and ambiguity, policies and procedures outlining the services provided, including limits on service, procedures, and any costs involved need to be established and made widely available.

Faculty Assistance

The Distributed Education librarian has already begun contacting departments and divisions offering distance education courses to develop rapport and advertise library services for distance learning. Librarians should also offer assistance to faculty developing online courses in order to determine the potential information and research needs of students in these courses. If any courses have an extensive research component, the librarians could be invited to serve as a "visiting faculty" resource sitting in for online courses and offering instruction or individual assistance to students. Reserves need to be addressed, and quickly. The demand is apparent.

Staffing

The current staffing of Distributed Education Library Services is not sufficient. Ashley Vollmer currently works 10-12 hours serving all IUB distance education students. If any significant demand starts to flow in, she will not be able to fulfill all requests in a timely fashion. A full-time staff position is required to adequately research, plan, and build library services. Even though the ACRL Guidelines and other sources recommend that library services for distance education should be funded by the institution in addition to existing library services and not from existing library funds, it appears that the latter is the case at IU. The IU library personnel budget has also

decreased over the past several years, making it necessary for the library to do more with less staff. External funds need to be appropriated to provide sufficient staff to serve DE students.

Implications

Based on all the evidence found in this study, several conclusions and recommendations were drawn. It should be noted that, while this document seeks to identify the library services needed to successfully serve the IST online program, the adoption or implementation of many of these conclusions would need to happen outside of IST. Some of these recommendations may be seen as impractical based on varying circumstances endemic to other offices, nonetheless we offer them based on user perceptions, literature recommendations, and personal observations.

Understanding user needs/expectations is critical if library services are to be considered successful by users. Without a firm understanding of the unique needs, constraints, and idiosyncrasies of distant students, Distributed Education Library Services will not be able to target or otherwise influence user expectations. To achieve this goal, libraries and the IST department should conduct similar surveys on a regular basis. Not only will this provide feedback on the performance of library services and student expectations, but it will also inform students of the services available.

The results of this study can assist policymakers, such as chief academic officers, head librarians, and distance program committees, as well as faculty and students, in making reasonable and informed judgments with regard to the quality of learner support for distance education.

The results obtained from interviews and document analysis will help to guide the decisions for important or critical services and resources to be included in the model. The next section will discuss the methodology that was used to investigate the research questions and to obtain the information that is the basis for identifying important services and the potential needs that should be built into the library model.

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