

# **Web-Based Education and the Graduate School of Library and Information Science, The University of Texas at Austin**

Prepared by Students  
in the Fall Semester 1999 Class in

*Systems Analysis and Evaluation*

**Andrew Adaryukov**

**Sheron Barnes**

**Allison Bartman**

**Malaika Boyd**

**Travis Duke**

**Yun-Ho Jung**

**Ching Lien**

**Chiao-Feng Lin**

**Mark Linsenmayer**

**Yue Liu**

**Itzel McClaren**

**Michelle Minto**

**Carlos Ovalle**

**Anne Price**

**C. S. Roshan**

**Morrie Schulman**

**Nancy Sparks**

**Ross Speir**

**Chris Stewart**

**Astrid Stimac**

**John Stubbe**

**Ryan Sullivan**

**Jiayin Tang**

**Alexia Thompson-Young**

**Mary Tucker**

**Carolyn Wickoff**

under the direction of

Professor Ronald E. Wyllys

Graduate School of Library and Information Science  
The University of Texas at Austin

1999 December 13

Those copyright items (if any) reproduced herein have been copied as fair use for the educational purpose for which the study treated herein was undertaken and is here reported. Except for such otherwise copyright items, the entire contents of this report are copyright © 1999 by Ronald Eugene Wyllys for the benefit of the GSLIS Foundation, Graduate School of Library and Information Science, The University of Texas at Austin, Austin, Texas 78712-1276. Permission to copy, quote, and/or reproduce, and/or use all or any part of the contents of this report (except those parts that are otherwise copyright) is granted to all persons and organizations, provided that due acknowledgment is made of the source of the material thus utilized.

Telephone: 512-471-3969/2742

Fax: 512-471-3971

Email: [wyllys@gslis.utexas.edu](mailto:wyllys@gslis.utexas.edu)

Graduate School of Library and Information Science  
Sánchez Building 564  
The University of Texas at Austin  
Austin, Texas 78712-1276

# **GSLIS Web-Based Education Project**

## **Table of Contents**

	Executive Summary.....	Section 1 Page 1
1.0	History and Overview of Web-Based Education.....	Section 1 Page 4
2.0	Instructional Design.....	Section 2 Page 1
3.0	Faculty and Staff.....	Section 3 Page 1
4.0	Student Issues.....	Section 4 Page 1
5.0	Technology Tools and Needs.....	Section 5 Page 1
6.0	Bibliography.....	Section 6 Page 1

## GSLIS Web-Based Education Project

### Executive Summary

#### Introduction

Technological change has created a new reality for higher education both by intensifying the need for ongoing education and training and by creating tools that have changed the teaching and learning process. Universities across the nation have responded with initiatives that utilize the World-Wide Web in instruction. Virtually all institutions use the Web to supplement resident courses and a growing number offer courses totally online as part of a distance-education (DE) effort.

The University of Texas System responded in 1998 with the creation of the UT TeleCampus. Efforts to use the Web to enhance instruction at the University of Texas at Austin have been undertaken at the departmental level. One of the more successful efforts has been the online delivery of LIS 312, *Information in Cyberspace*, by the Graduate School of Library and Information Science (GSLIS).

Recognizing the importance of Technology Enhanced Learning (TEL) and Web-Based Education (WBE), the Fall 1999 Systems Analysis class of Dr. Ronald E. Wyllys has prepared this report to advise the Graduate School of Library and Information Science at the University of Texas at Austin (UT-Austin) on how to utilize Web-based instruction in its curriculum, particularly with respect to its distance-education program.

#### Organization of Report

This report will:

- Summarize the current TEL/ DE/WBE environment
- Provide a history of TEL/DE/WBE efforts at UT and the GSLIS
- Make recommendations to the GSLIS on how to utilize WBE into a DE program

The report is organized into five primary sections corresponding to the five groups that were formed to study the issues: History and Overview of GSLIS Web-Based Education, Instructional Design for WBE, GSLIS Faculty and Staff, GSLIS Students, and Technology Tools and Needs. The final section presents recommendations the class endorsed at its final meeting.

This is a collaborative work written by individual groups. Any inconsistencies or contradictory findings across groups simply reveal the complexity of the subject matter and the need for the GSLIS to conduct further research to reach a consensus on the issues.

**Section One**, *History and Overview of Web-Based Education (WBE)*, discusses the WBE/DE market environment, provides a history of WBE/DE efforts at UT-Austin and within the GSLIS, reviews current LIS distance-education efforts underway, and concludes with the analysis of a survey conducted by the Group to explore the potential customer pool for GSLIS WBE/DE efforts.

**Section Two**, *Instructional Design for WBE*, briefly describes the instructional design process for traditional as well as Web-based instructional materials, assesses the current instructional design process used in GSLIS courses and proposes an instructional design method and process for Web-based distance education.

**Section Three**, *GSLIS Faculty and Staff*, explores faculty and staff views of WBE and the needs of faculty and staff in order to offer WBE.

**Section Four**, *GSLIS Students*, discusses what students expect and want from WBE/DE courses, how they would react to an offering of these courses, and how the availability of such courses would have effected their decision to attend the GSLIS in Austin.

**Section Five**, *Technology Tools and Needs*, deals with the types of communication available in a Web-based environment, "courseware packages," authentication and security issues, an assessment of GSLIS Web-related technologies, and current trends in Web-based education technologies.

## Section One Table of Contents

- 1.0 History and Overview of Web-Based Education
- 1.1 Overview of DE and WBE Market
- 1.2 Institutional Perspective
- 1.3 GSLIS Historical Perspective
  - 1.3.1 Principles for Web-Based Distance Education
  - 1.3.2 Current Master's Program
- 1.4 GSLIS WBE/Distance-Education Efforts
  - 1.4.1 Four Directions Project
  - 1.4.2 LIS 312, *Information in Cyberspace*
  - 1.4.3 Collaboration with the Monterrey Institute of Technology and Higher Education
  - 1.4.4 Collaboration with the University of Buenos Aires
  - 1.4.5 Borderless Educational Initiatives Committee
  - 1.4.6 GSLIS 2000-2001 IT Vision Plan and the New Curriculum
- 1.5 The Need for a GSLIS DE/WBE effort
  - 1.5.1 Library Director Interviews
- 1.6 Concerns with Web-Based Distance Education
  - 1.6.1 Accreditation Issues
    - 1.6.1.1 Southern Association of Colleges and Schools
    - 1.6.1.2 American Library Association
  - 1.6.2 Usability Analysis and Product Design
    - 1.6.2.1 Benefits of good design
    - 1.6.2.2 User analysis
    - 1.6.2.3 Task analysis
    - 1.6.2.4 Interface Design and Testing
    - 1.6.2.5 Accessibility
  - 1.6.3 Copyright Issues
    - 1.6.3.1 Current Copyright Law
    - 1.6.3.2 Fair Use for Teaching and Research
    - 1.6.3.3 Additional Sources of Copyright Information
- 1.8 Marketing Survey
  - 1.8.1 Discussion of Methods Employed
  - 1.8.2 Summary and Discussion of the Data Acquired
  - 1.8.3 Marketing Advice from Other Institutions
- 1.9 Summary and Recommendations

## **1.0 History and Overview of Web-Based Education**

### **1.1 Overview of DE and WBE Market**

The market for distance education in higher education is growing and becoming increasingly competitive. In 1998, about 710,000 students or 5% of all students enrolled in higher education were enrolled in distance-education courses. In 2002, an estimated 2.2 million students or 15% of all students to be enrolled in higher education courses will be enrolled in distance-education courses (IDC, 1999). The demand for distance-education courses among students is driven not only by the convenience of taking a course remotely but also by expectations for technology-enhanced teaching and learning.

However, “convenience” is the most cited factor in choosing distance education over on-campus instruction. The majority of students who enroll in distance-education courses are over 25 years old, employed, and have previous higher education experience (Petersons, 1999).

Competition has increased among colleges and universities to meet the demand for distance-education courses. In 1995, only 33% of four-year colleges in the U.S. offered distance-education courses. In 1998, this number increased to 62% of colleges and is estimated to reach 84% of colleges by 2002 (IDC, 1999). Four-year colleges are competing in the distance-education market with:

- Traditional universities;
- For-profit universities (e.g., University of Phoenix, Caliber Learning, Unext.com);
- Corporate universities (Motorola, Dell, IBM, Oracle, Sun Microsystems, Applied Materials, Ford Motor);
- Consortia (National Technological University, Western Governors University); and
- Virtual universities (British Open University).

The historical development of distance education has progressed through three phases characterized by introductions of technological tools, which have altered the delivery of distance-education courses:

- Phase I – correspondence courses
- Phase II – televised courses, video conferences, video cassettes, teleconferences
- Phase III – Internet courses and Web-based digital media

The current trend in distance education is toward online instruction using desktop applications. New technologies on the Internet have created direct competition for distance-education students among traditional academic institutions and other distance-education course providers. New distance-education providers like for-profit universities and corporate universities may have an advantage over traditional academic institutions in the distance-education market because the new providers may have more aggressive and focused marketing resources and more clearly articulated programs of customer service. Traditional academic institutions combat this competition by offering distance-education courses that lead to accredited degrees.

### **1.2 Institutional Perspective**

The University of Texas at Austin, home to over 48,000 students, 2,700 faculty and 17,000 staff members, is a research institution that strongly values independence and academic freedom. Though it has continually sought to incorporate information technology into instruction, this largest component of the University of Texas System is a very different environment from the University of California at Los Angeles, whose administration required in 1998 a Web presence for every course.

Faculty and staff at UT-Austin have been using the Web to supplement instruction since 1993 when two of the 125 Web servers worldwide were on the Austin campus. The following year the award-winning World Lecture Hall (<http://www.utexas.edu/lecture>) began as “WWW for Instructional Use.” Many of the early

adopters who used this new resource served on key committees that had great influence on information technology at the University.

One such committee, the Faculty Computing Committee (FCC), developed a Vision Plan in 1989 that shaped the University's efforts. The stated goal of its 1995–2001 Vision Plan was to establish the University of Texas at Austin as a leader in the effective use of information technology in instruction, research, and service.

Two other committees, the 1994 Multimedia Instruction Committee (MIC) and the 1997 Long Range Planning for Information Technology Committee, had a large impact on the infusion of information technology into teaching and learning. From recommendations proposed by the MIC, then-Provost Mark Yudof brought together three smaller entities in 1996 to form the core of a new Center for Instructional Technologies (CIT) to champion the development of innovative instructional technologies on campus.

The creation and implementation of a clear institutional distance-education policy was slowed in 1997 and 1998 while the University selected a new president and provost. In the spring of 1999, the new provost, Sheldon Ekland-Olson, coined the term “local distance learning” which describes much of the university's efforts to incorporate technology into instruction. The provost also requested a report from the Technology Enhanced Learning Committee to be published in the fall semester of 1999. This report will provide the basis for institutional technology enhanced learning and distance-education policies and procedures.

The Committee, while recognizing that the University must respond to market and environmental forces, issued two guiding principles in an October draft of its report: 1) Policies about the adoption of technology and use of distance education should focused on the quality and enhancement of student education, and 2) policies must be coupled with resources for faculty and for the infrastructure necessary to provide quality technology enhanced learning and distance education. The report goes on to make a number of recommendations concerning policies and practices related to

- Faculty capacity, incentives and compensation
- Infrastructure requirements and delivery technologies
- Course/program priority and selection mechanisms
- Instructional design, quality and standards
- Student-faculty and student-student interactions

The call for the report indicates that institutional support for TEL/DE is forthcoming. The draft seems to supplement the findings of the “IT 2000 Report of the Long-Range Planning for Information Technology Steering Committee” which determined the following about distance education:

The question, most agree, is not whether we should get involved. We must. Peter Drucker, for example, predicts the demise of the American University in the next 20 years if costs continue to escalate (<http://www.forbes.com/forbes/97/0310/5905122a.htm>). If universities are unwilling to change, private industry will be happy to supply remotely the learning environments that students need to achieve their educational goals.

No, the question of distance education is now a more practical one: how will we do it? How will we find the people to craft the new systems? How will we reward them?

### **1.3 GSLIS Historical Perspective**

Distance education and TEL are intrinsic to the mission of the GSLIS: to prepare practitioners and researchers to identify, create, and apply effective strategies for connecting people with information. The School, which celebrated its 50<sup>th</sup> anniversary in 1998, has been involved with distance education since 1973. Courses via interactive video teleconferencing have been offered to students in San Antonio and El Paso since 1991. Largely because these courses have been a financial strain on the department, the Graduate Studies Committee passed a resolution in its October 13, 1998 meeting that “Web based courses will gradually replace at least some of the Broadcast courses”.

Departmental efforts to formalize TEL/DE policies and procedures parallel those of the University. During 1997 and 1998, an interim dean led the GSLIS while the University searched for a permanent president and provost. With the selection of a new dean in the fall of 1999, the School is now in a position to move forward with new TEL initiatives. Dean Roberta Shaffer leads a School that consists of over sixteen full-time faculty, twenty visiting and part-time faculty, and approximately twelve FTE staff consisting of four professional, eleven administrative, and eight IT lab staff members.

### **1.3.1 Principles for Web-Based Distance Education**

Although the School has not formally adopted a distance-education plan, an April 15, 1999 document entitled "Principles for Web-based Distance Education: Faculty Ownership and Responsibility" seems to have been approved by consensus. This document, which highlights three points that the department considers essential, serves as the basis for existing WBDE efforts. It was created partly in response to the perceived practices of the University of Texas TeleCampus and was written when the GSLIS declined to receive funds from or use TeleCampus resources in the creation of an online course. In summary the text states that:

**1. Faculty member and instructors usually own the instructional material they create.**

**2. Stand-alone Web-based education is insufficient for purposes beyond simple training.**

Stand-alone refers to the absence of instructor interaction altogether, or courses that are sold as complete products in and of themselves.

**3. GSLIS has an obligation to provide the highest quality distance-education services possible.**

### **1.3.2 Current Master's Program**

The current options in the Master's program include five "tracks": general librarianship, learning-resources, information science, archival and records enterprise, and preservation and conservation studies. Three courses are currently required of all Master's students: LIS 386.1 Introduction to Library and Information Studies, LIS 387.1 Administration of Libraries and Other Information Agencies, and LIS 397.1 Research in Library and Information Science. Because a redesign of this curriculum is currently underway with projected completion in the fall of 2001, specific recommendations made in this report will need modification prior to implementing the new Web-based education program.

## **1.4 GSLIS WBE/Distance-Education Efforts**

GSLIS courses have utilized various Internet technologies for several years. This includes the use of online course syllabi, mailing lists, Web boards, Web design, file transfer and sharing, and other Internet related technologies.

### **1.4.1 Four Directions Project**

Dr. Loriene Roy designed the first completely online course developed at GSLIS through the Four Directions project (<http://www.4directions.org>). The federally funded Four Directions project focuses on the integration of Native American culture and information technologies, primarily through the use of the World-Wide Web. Initially offered in Spring of 1999, this "Online Course in Library Studies" was offered through the UT-Austin Department of Continuing and Distance Education. Teachers and staff affiliated with Four Directions schools were eligible to receive three hours of non-degree credit from the university by taking this class.

### **1.4.2 LIS 312, *Information in Cyberspace***

Doctoral student Grete Pasch taught the second Web-based course at GSLIS during the summer semester of 1999. She and GSLIS staff member Quinn Stewart designed the online offering of the undergraduate class LIS 312, *Information in Cyberspace*. The majority of the course material is online, although physical

meetings were required for an initial orientation, quizzes, and final presentation. The course is still offered, and further information is available at <http://www.gslis.utexas.edu/~lis312g>.

#### **1.4.3 Collaboration with the Monterrey Institute of Technology and Higher Education**

In October of 1999, GSLIS formally entered a contract with the Virtual University at the Monterrey Institute of Technology and Higher Education (Instituto Tecnológico y de Estudios Superiores de Monterrey, or ITESM). GSLIS is committed to developing the content for five online courses, while ITESM is responsible for the technical development and delivery technologies of said courses. GSLIS receives 5% of the total tuition for the course as it is offered at ITESM. Participating faculty do not receive specific incentives to develop these courses. However, additional staff or T.A. hours are available to them as well as an increased travel fund.

#### **1.4.4 Collaboration with the University of Buenos Aires**

The GSLIS is in the process of formalizing distance-education initiatives with the University of Buenos Aires. The Antorchas Foundation supports this effort. In the past, this has involved faculty and student exchanges between the two universities.

#### **1.4.5 Borderless Educational Initiatives Committee**

Two projects related to WBE in the GSLIS were undertaken during the Fall 1999 semester: the efforts to develop a new curriculum, mentioned above, and the formation of the Borderless Educational Initiatives Committee (BEIC). Headed by Assistant Dean Mary Lynn Rice-Lively, the BEIC was charged by Dean Schaffer to focus on existing initiatives and investigate the development of new initiatives in distance and continuing education. This committee will be involved with implementing the recommendations made in this report.

#### **1.4.6 GSLIS 2000-2001 IT Vision Plan and the New Curriculum**

The Vision Plan for 2000-2001 has included requests for funds for the formation of a technical “boot camp” in which students will learn how to use necessary technologies. ([http://www.gslis.utexas.edu/program/GSLIS\\_vision\\_plan.PDF](http://www.gslis.utexas.edu/program/GSLIS_vision_plan.PDF)). Currently, portions of this “boot camp” are being designed for online use through Web-enhanced tutorials.

The Vision Plan also requests funds for the development of six Web-based courses as part of the School’s curriculum redesign. GSLIS plans to offer at least portions of the new Foundations and Gateway core courses online. Requested funds would cover the salary of graduate research assistants who would be responsible for converting course materials to their appropriate technological formats.

### **1.5 The Need for a GSLIS DE/WBE effort**

Library schools in the United States continue to explore the potential of distance education as a way of overcoming constraints of location, distance, and time to students pursuing a degree in library science. Most library schools offer distance-education classes as part of their program, and, generally, the number of distance-education courses offered by library schools continues to grow. In 1998, approximately 176 more courses were taught as distance education by library schools than in 1995 (Chepesiuk, 1998). The number of library school programs offering distance education increased between 1998 and 1999 from 75% to 85% of all library school programs (Kirk and Bartlestein, 1999).

Distance education is an established part of library education. The predominant model for distance education in library schools has been the use of interactive television connecting remote class sites to main campuses. The University of South Carolina library school began using televised courses to remote sites in South Carolina as early as 1976. The USC program now stretches across state boundaries to include remote sites in Georgia and West Virginia. A review of currently accredited ALA library schools offering distance education shows that interactive television is still the mode of distance-education course delivery used by

most library schools. Within a model of interactive television course delivery, like the one at USC, faculty members teaching a distance course are required to visit each remote site once or twice a semester.

As new technologies have become available, library schools have expanded their distance-education course delivery systems. Among the list of library schools whose master's programs are currently ALA -accredited, none of the distance-education programs are exactly alike. Most of these schools use various combinations of interactive television with email, traditional correspondence, compressed video, and Web resources, such as Web pages and chat rooms.

The Internet is now integrated within most library school programs. In most graduate library-science programs, communication between faculty, students and classmates is enhanced through email listservs, and collaborative learning is encouraged through Web page publishing. The three graduate library schools in Texas have capitalized on the collaborative potential of the Internet in distance-education course delivery. The University of North Texas (UNT) library-science program has joined with the library-science program at Texas Woman's University (TWU) in delivering library-science courses to four other university sites in the state. The collaboration was launched in 1998 and uses interactive television and Internet communication tools. UNT and TWU chose to collaborate on the program in order to share resources limited by their tight budgets (Chepesiuk, 1998).

Interactive television has allowed the growth in distance education, and the use of Internet communication tools is expected to continue the growth of library distance education. As part of this UT GSLIS Web-based Education Project, we sought to review existing library school programs that offer fully Web-based courses. We defined "fully Web-based" as course work distributed over the Internet, utilizing a combination of tools including Web pages, email, conferencing networks, newsgroups, Internet chat, and online environments other than interactive television. Information from other graduate library schools using fully Web-based course delivery may be helpful to UT GSLIS in shifting from current interactive television delivery systems. However, few graduate library schools currently provide courses that are fully Web-based.

In the Fall 1999 semester, eight graduate library-science programs accredited by the ALA offered distance-education courses that were fully Web-based. Those programs were:

- University of Arizona
  - School of Information Resources and Library Science
- Florida State University
  - School of Information Studies
- University of South Florida
  - School of Library and Information Science
- University of Illinois at Urbana-Champaign
  - Library Education Experimental Program (LEEP3)
- Emporia State University
  - School of Library and Information Management
- University of Missouri-Columbia
  - School of Information Science and Information Technologies
- Syracuse University
  - School of Information Studies
- State University of New York at Buffalo
  - Department of Library and Information Studies

Each of the programs has incorporated Web-based instruction in different ways. A rough estimate is that each program offered 15 to 25 percent (about four to six courses) of its total Fall 1999 schedule as Web-based courses. This percentage of courses in most of the programs will increase in the Spring 2000 semester. Notable exceptions to this ratio are Florida State University, whose graduate library-science program offers about half of all courses (21 of the programs 45 Fall 1999 courses) as fully Web-based each semester, and Syracuse University, whose graduate library-science program offers 13 Web-based courses each semester. (Course schedule information for the University of Illinois LEEP3 program was not available. Information regarding specific courses in this program is password protected.)

All of the graduate library-science programs that offer fully Web-based courses have on-campus requirements, but the extent of on-campus participation varies among programs. The program with the least on-campus requirement is the Florida State program. This program requires a three-day orientation on campus before beginning course work. The rest of the degree program is available on the Internet.

The Illinois LEEP3 program and Syracuse University have graduate library-science distance-education programs that require summer orientation and introductory course work on campus. Thereafter, both programs require brief on-campus sessions before each semester.

Required courses for the graduate library-science degrees at the other universities are not all available as Web-based courses or as distance-education courses delivered through other means. Students seeking a degree from these programs would expect to spend at least 12 semester hours in campus-based classroom courses.

All of the eight graduate library-science programs offering fully Web-based courses use Web sites to deliver syllabi, class assignments, and to provide a forum for asynchronous class discussion. All of the programs utilize email to facilitate communication between professors and students. The University of Arizona, the University of Illinois, and Syracuse University offer graduate library-science students the online capability for “live” synchronous interaction using Internet chat rooms. Other programs indicate that this component will be included soon as part of their Web-based course delivery. Emporia State is currently experimenting with Internet video conferencing to include in their Web-based courses.

The most popular software programs for Web-based course delivery among the eight graduate library-science programs offering fully Web-based courses are WebCT, CourseInfo, and FirstClass. All of the eight library-science programs require students to have the following basic computer technology:

- At least a 486 based PC or equivalent Macintosh
- A high-speed modem with at least 28,000 baud rate
- Direct access to the Internet via SLIP/PPP access or via Ethernet
- A graphical Web browser in an up-to-date version.

Further details of the eight graduate library-science programs offering fully Web-based courses are included in Section One, Appendix A.

### **1.5.1 Library Director Interviews**

As part of the UT GSLIS Web-Based Education Project, several public library directors throughout Texas were contacted via email to ask their opinion on Web-based library-science education. Existing library staff in public libraries may be a target audience for Web-based library-science courses. Professional public librarians may wish to update their education, and paraprofessional staff may wish to earn a professional library degree. All the responses received were very brief, but all expressed an interest in favor of Web-based library-science course delivery.

A director from a rural public library system reported that she has already received a number of queries about the availability of Web-based library-science courses from her staff. She wrote:

“Study time, travel time and time away from the family often are great deterrents to attending graduate school, even if the school is relatively close by. Eliminating some of the time elements and allowing the student to learn from the home or local library might make graduate study a more viable alternative for some.”

One director from an urban public library system indicated that a demand does exist for Web-based library-science courses among the workforce in her public library system. She reported that these courses would be “appreciated and utilized.” Furthermore, she indicated that public libraries would benefit in general from

the availability of Web-based library-science courses as an enhancement for professional recruitment into public libraries.

Chepesiuk (1998) describes how public libraries will benefit from Web-based library degree programs as an enhancement of professional recruitment. As existing public library staff members seek library-science degrees made more easily available via Web-based courses, these staff members will help to fill the shortage of librarians expected to result from the retirement of many professional librarians who entered the profession in the 1960s.

A reciprocal benefit would occur from public library staff utilizing Web-based courses. Those staff members who have used Web-based courses in earning their library-science degrees could then, in turn, use their knowledge of this form of distance education to reinforce information services provided to other customers who depend on the public library as a distance-education resource.

## **1.6 Concerns with Web-Based Distance Education**

In order to design a successful WBE program, the GSLIS must carefully consider the issues of accreditation, usability and accessibility, and copyright. Though many of these issues will be covered in respective sections of participating groups, this section will provide an overview regarding these important concerns about WBDE.

### **1.6.1 Accreditation Issues**

A major concern expressed by participants in Group One's marketing survey (further discussed in subsequent sections) was that of accreditation. Although not an option participants could select in our survey, several people made mention of this concern in their response to our open-ended questions (see Section One Appendix C). Participants referred specifically to American Library Association accreditation.

GSLIS is part of two accreditation processes. The first is the University-wide accreditation by the Southern Association of Colleges and Schools (SACS) (<http://www.sacs.org>). The second is the program-specific accreditation by the American Library Association (<http://www.ala.org>). Each has similar concerns about distance education expressed in their guidelines.

#### **1.6.1.1 Southern Association of Colleges and Schools**

In Section IV of its Criteria for Accreditation, SACS recognizes the validity of distance education, and notes that "an institution **must** formulate clear and explicit goals for its distance learning programs and demonstrate that they are consistent with the institution's stated purpose" (SACS, 1998). SACS also requires that the institution must provide structured access to and interaction with faculty and provide students with access to student services and learning resources.

The University of Texas has offered distance courses through various colleges, the UT TeleCampus, and the Department of Continuing and Distance Education. Thus far, SACS accreditation has not been a serious problem. The University of Texas' Office of Accreditation Studies performed a required self-study during the 1996-1998 re-accreditation process. The office chose to focus on information technology and the future of the university. The results of this study can be found at <http://www.utexas.edu/depts/evpp/directory/units/accred/accred.index.htm>

SACS also accredits ITESM's Virtual University. ITESM is currently using a "virtual library" for students to use as a learning resource.

#### **1.6.1.2 American Library Association**

The American Library Association's Standards for Accreditation do not distinguish between forms or delivery of course material. "The Standards neither extol nor caution against distance education" (ALA,

1992). However, ALA does provide information on “distance-education opportunities” on its listing of accredited schools. Several ALA accredited schools currently offer Web-based courses or degrees, specifically mentioned in section 1.5. In a well-circulated email message, the current chair of ALA’s Committee on Accreditation, Dr. Beverly P. Lynch, noted that emphasis is on the program itself rather than location or means of delivery.

A main concern of ALA is for colleges offering distance-education courses or degrees to make comparable services available to distance students. In 1998 the Association of College and Research Libraries and the ALA Standards Committee approved “ACRL Guidelines for Distance Learning Library Services” (<http://www.ala.org/acrl/guides/distlrng.html>). These guidelines note that “special funding arrangements, proactive planning, and promotion are necessary to deliver equivalent library services and to maintain quality in distance learning programs” (ACRL, 1998). These guidelines also offer suggestions for management, personnel, and services that should be required.

Dr. Brooke Sheldon is currently the head of the GSLIS Committee on Accreditation. Dr. Sheldon has served as President of the American Library Association and as chair of its Committee on Accreditation. It is Dr. Sheldon’s opinion that our concerns with equitable resources are in line with other professional programs in our field, and that our distance-education efforts do not jeopardize our accreditation.

### **1.6.2 Usability Analysis and Product Design**

Additional information and detail on this subject is available in Section 2: Instructional Design.

#### **Usability**

To be usable, an interface must let the people who use the product (users), working in their own physical, social, and cultural environments, accomplish their goals and tasks effectively and efficiently. The design of Web-based instructional tools requires the consideration of usability for both instructors and students. Taking into account usability issues at each end of instructional tool utilization will surely present design complications above and beyond those encountered in the design of other types of software with a single user group. For this reason it is essential that consideration of usability issues be one of the first steps in the design of our products.

Traditional usability analysis can be divided into three major components: user analysis, task analysis, and interface testing. The following is a brief description of how each of these components might be approached when designing our Web-based instructional tools. Although ease of use is the ultimate objective, greater simplicity is often achieved at the cost of program versatility and of added functions. Those who are responsible for the design of the Web-based tools will need to find the optimal level of flexibility and usability, and this can only be accomplished by gathering sufficient information about the instructors and students and then testing a series of prototype designs.

#### **1.6.2.1 Benefits of good design**

- The training time required for professors to learn about and understand the mechanics of instructional tools would be decreased. This could increase the probability that instructors would utilize the various tools available to them.
- The costs associated with support and tech staff would be reduced.
- Instructors will be less burdened with the time and effort required to work with the tools and can thus spend more time working with their students in a teaching capacity.
- Students will be less burdened with the time and effort to use the tools and can thus spend more time on the curriculum.
- Students will have more favorable impressions of our product and of Web-based courses in general. This could translate to increased numbers of students registering for such courses.

### **1.6.2.2 User analysis**

The aim of this step is to understand the characteristics of the users (both the instructors and the students) and their environments. Both User Analysis and Task Analysis can be carried out simultaneously by means of questionnaires to and interviews of potential users. An instructor and student profile will be generated in order to guide design toward the needs of the users. The following information would need to be obtained in order to do this.

What are some of the underlying motivations of the instructors (to make instruction easier, to make instruction more effective, to teach a greater number of students)? How do they feel about Web-based instruction? Do instructors have a choice as to whether or not they will be required to teach Web-based courses? Were they involved in the decision-making process? It is important to develop an initial model of how users might view our product.

What are some of the various teaching styles? There are sure to be differences in the amount of actual lecture material (versus independent research and learning) that instructors provide to their students. What do instructors know about instructional theories or learning theories? Providing this type of information along with how it relates to the instructional tools could motivate teachers to spend more time implementing and using them. How familiar with computer technology are most instructors? How familiar with computer technology are most students? Will there be a minimum level of technical knowledge required of students in order to enroll in Web-based courses? What peripherals are available or are required of the students, instructors?

Included in this assessment is the range of variation: to what extent are the users and environments alike and what is the extent of the differences. Are these characteristics likely to change significantly in the near future (e.g., technical experience or number of students with high-speed Internet access)?

### **1.6.2.3 Task Analysis**

Much of the task analysis will come directly from information obtained from the user analysis. Instructors are ultimately responsible for their courses, so their instructional needs will dictate what our product is designed to do. One issue of task analysis that designers will need to consider involves the degree of flexibility that the instructional tools will offer. Maintaining flexibility in the curriculum will be crucial for several reasons. We must be able to accommodate various teaching styles, student abilities, schedules, and environments. However, the cost of greater flexibility is decreased simplicity, increased time and effort required for planning, and more room for error or confusion.

### **1.6.2.4 Interface Design and Testing**

The third component of Usability Analysis and Design is interface design and testing. Interface usability testing is usually carried out in a controlled environment with potential users asked to carry out the various tasks that the program is designed for. Observers simply make note of problems and confusions that the user experiences. Users are often asked to talk aloud as they are engaged with the interface, and sessions can be videotaped for later reference. After a number of testing sessions (eight is considered sufficient), the program is redesigned and another round of usability testing begins. This process continues until designers are satisfied that the instructional tools maximize simplicity and versatility.

### **1.6.2.5 Accessibility**

The Americans with Disabilities Act places requirements on providers of goods and services to make their enterprises accessible to individuals with disabilities. Web-based instructional tools, therefore, must be designed for a variety of audiences. The department is advised to review the Act and consider the following resources:

- Web Content and Accessibility Guidelines at <http://www.w3.org/wai>.
- WebABLE Solutions at [www.WebABLE.com](http://www.WebABLE.com)

- HTML Writer's guide Web site at [www.hwg.org](http://www.hwg.org) and a presentation at <http://www.hwg.org/opcenter/events/fedWeb/20.html>
- Microsoft's Enable site at [www.microsoft.com/enable](http://www.microsoft.com/enable)
- An automated accessibility evaluator at [www.cast.org/bobby](http://www.cast.org/bobby)

### 1.6.3 Copyright Issues

The application of copyright law to online distance education has been a matter of great concern. In May of 1999, the national Copyright Office released its report to Congress as mandated by the Digital Millennium Copyright Act of 1998. This Report on Copyright and Digital Distance Education (353 pages including appendices) is available at [http://www.loc.gov/copyright/cpypub/de\\_rprt.pdf](http://www.loc.gov/copyright/cpypub/de_rprt.pdf). The American Library Association Washington Office Newslines provides information about the report at <http://www.ala.org/washoff/alawon/alwn8050.html>. The report is very comprehensive and relates several topics of interest, including a thorough analysis on copyright law, existing technologies, and recommendations for changes in copyright law.

Georgia Harper is the manager of the Intellectual Property Section of the Office of General Counsel at the University of Texas. She has several online pages dealing with copyright, including "Copyright and the University Community" at <http://www.utsystem.edu/OGC/IntellectualProperty/admin.htm> and her "Crash Course in Copyright" at <http://www.utsystem.edu/OGC/IntellectualProperty/cprtindx.htm#top>. Guidelines for copyright information on digital material can be found there. Generally, reliance on fair use (discussed in more detail in 1.6.3.2) is an option when using distance-learning materials for limited use at the university. If commercialization is an eventual option, however, fair use may not be appropriate. It is generally recommended that faculty follow the university's Fair Use Rules of Thumb found at <http://www.utsystem.edu/OGC/IntellectualProperty/COPYPOL2.HTM#liability>. These Rules of Thumb cover the use of course packs, distance learning, image archives, multimedia works, music, research copies, and reserves.

#### 1.6.3.1 Current Copyright Law

Is posting part of document on a Web site that is password protected Fair Use (17 U.S.C. §107 in 1976) or copyright infringement? The following excerpt defines copyright and fair use in the context of education and offers useful advice to consider when using portions of copyrighted material as course reading.

The federal copyright statute governs the reproduction of works of authorship. In general, works governed by copyright law include such traditional works of authorship as books, photographs, music, drama, video and sculpture, and also software, multimedia, and databases. Copyrighted works are protected regardless of the medium in which they are created or reproduced; thus, copyright extends to digital works and works transformed into a digital format. Copyrighted works are not limited to those that bear a copyright notice. As a result of changes in copyright law, works published since March 1, 1989 need not bear a copyright notice to be protected under the statute.

Two provisions of the copyright statute are of particular importance to teachers and researchers:

- a provision that codifies the doctrine of "fair use," under which limited copying of copyrighted works without the permission of the owner is allowed for certain teaching and research purposes; and
- a provision that establishes special limitations and exemptions for the reproduction of copyrighted works by libraries and archives.

The concept of fair use is necessarily somewhat vague when discussed in the abstract. Its application depends critically on the particular facts of the individual situation. Neither the case law nor the statutory law provides bright lines concerning which uses are fair and which are not. However, you may find it helpful to refer to certain third party source materials. A group consisting of the Authors League of America, the Association of American Publishers, and an ad hoc committee of educational institutions and organizations has prepared guidelines for classroom copying by not-for-profit educational institutions. In addition, a group coordinated by the consortium of College and University Multimedia Centers (CCUMC)

has prepared fair use guidelines for educational multimedia. These guidelines describe safe harbor conditions, but do not purport to define the full extent of “fair use.”

### **1.6.3.2 Fair Use for Teaching and Research**

The “fair use” doctrine allows limited reproduction of copyrighted works for educational and research purposes. The relevant portion of the copyright statute provides that the “fair use” of a copyrighted work, including reproduction “for purposes such as criticism, news reporting, teaching (including multiple copies for classroom use), scholarship, or research” is not an infringement of copyright. The law lists the following factors as the ones to be evaluated in determining whether a particular use of a copyrighted work is a permitted “fair use,” rather than an infringement of the copyright:

- the purpose and character of the use, including whether such use is of a commercial nature or is for non-profit educational purposes;
- the nature of the copyrighted work;
- the amount and substantiality of the portion used in relation to the copyrighted work as a whole, and
- the effect of the use upon the potential market for or value of the copyrighted work.

Although all of these factors will be considered, the last factor is the most important in determining whether a particular use is “fair.” Where a work is available for purchase or license from the copyright owner in the medium or format desired, copying of all or a significant portion of the work in lieu of purchasing or licensing a sufficient number of “authorized” copies would be presumptively unfair. Where only a small portion of a work is to be copied and the work would not be used if purchase or licensing of a sufficient number of authorized copies were required, the intended use is more likely to be found to be fair.

A federal appeals court recently decided an important copyright fair use case involving course packs. In *Princeton University Press, et al. v. Michigan Document Services*, the U.S. Court of Appeals for the Sixth Circuit concluded that the copying of excerpts from books and other publications by a commercial copy service without the payment of fees to the copyright holders to create course packs for university students was not fair use. The size of the offending excerpts varied from 30 percent to as little as 5 percent of the original publications.

Where questions arise, we suggest that you consult the guidelines for classroom copying and other available source material available on the fair-use Web site. Please note that the guidelines are intended to state the minimum, not the maximum, extent of the fair-use doctrine. Thus, just because your use is not within the guidelines, it is not necessarily outside the scope of fair use. In the absence of a definitive conclusion, however, if the proposed use deviates from the guidelines, you should consider obtaining permission to use the work from the copyright owner.

Some photocopying services will obtain copyright permission and add the price of the royalties, if any, to the price of the materials. A request to copy a copyrighted work should generally be sent to the permission department of the publisher of the work. Permission requests should contain the following:

- Title, author, and/or editor, and edition
- Exact material to be used, giving page numbers or chapters
- Number of copies to be made
- Use to be made of the copied materials
  - Form of distribution (classroom, newsletter, etc.)
  - Whether the material is to be sold

### **1.6.3.3 Additional Sources of Copyright Information**

In addition to the resources mentioned above, the GSLIS may want to consider:

- UCLA Office of Instructional Development - Copyright Issues for Academics - <http://www.oid.ucla.edu/fnmc/fairuse.htm>

- The Copyright Website - <http://www.benedict.com/>
- Stanford University Libraries' Copyright and Fair Use - <http://fairuse.stanford.edu/>
- US Copyright Office Report on Copyright and Digital Distance Education - <http://www.loc.gov/copyright/>
- Copyright Law on the Internet - <http://www.cli.org/Caching.html>

## **1.7 Information Technology Budget at the University of Texas**

Money for technology at the University of Texas comes from a variety of sources. These sources include allocations from the legislature, allocations by the UT System, allocations from UT-Austin, the Instructional Technology Fee (ITF), college fees, course fees, and, in some cases, the Dean's discretionary fund. Funds specifically for Web-based distance education can come from any of these sources directly or through cooperation with other University of Texas entities such as Academic Computing and Instructional Technology Services (ACITS) or the UT TeleCampus. However, cooperation with these entities may lead to additional complications in the use of these funds, ownership, and deployment of course material.

### **1.7.1 The Information Technology Fee and the Vision Plan**

The Information Technology Fee brought in approximately 7.5 million dollars for the 1999-2000 school year. These funds are divided among the different organizations with control over the University of Texas Network (UTNet). The primary recipients are ACITS, the General Libraries, and the colleges of the University of Texas. These funds are for student and instructional use only. Other parts of UTNet (the largest of which is Academic Computing Services) are funded through other fees.

Every college receives \$25,000 automatically for infrastructure purposes. Additional funds are allocated based on the number of credit hours created by the specific college. A large portion of the fee is allocated based on participating groups' Vision Plans. The eighteen-member Information Technology Advisory Committee (ITAC) reports to the Provost of the University to decide how the Vision Plan funds are dispersed. ITAC receives allocation recommendations from other groups such as ACITS, the Information Technology Coordinating Council (ITCC), and on at least one occasion the Deans of Technology from all the colleges of the University. GSLIS did not have faculty or student membership in ITAC for the 1998-1999 or 1999-2000 school years.

### **1.7.2 Web-Based Distance-education costs at GSLIS**

The creation of a Web-based education program is likely to be an expensive undertaking. The cost of additional personnel and equipment, as suggested in the subsequent sections of this report, can be considerable. As a result, the GSLIS must be creative and develop new sources of income. This is especially true since, according to Dr. Philip Doty, GSLIS representative on the Information Technology Coordination Council, there is no new budgetary money at the University of Texas.

Potential sources of revenue for the GSLIS include: increasing the number of LIS 312 and other successful classes, collaborating with other departments in order to receive additional Vision Plan funding, collaborating with other universities as is being done with ITESM and the University of Buenos Aires, forming strategic partnerships with local technology businesses, marketing course modules to associations and private industry, and re-evaluating the relationship with the UT TeleCampus with respect to both funding and marketing assistance.

The results of the marketing survey discussed in the next section also point to a potentially large revenue source, that of offering continuing-education courses.

## **1.8 Marketing Survey**

We administered a questionnaire designed to gauge the demand for distance-education courses and to help determine how a marketing campaign designed to promote such courses should be targeted. We then

compared our analysis of this survey data with the comments of some professionals involved in marketing online librarianship courses at other institutions.

### **1.8.1 Discussion of Methods Employed**

To gauge the demand for distance-education courses, we posted an online survey (see Section One, Appendix B) for a period of approximately three weeks. Our sole method of acquiring respondents for this survey was posting to library-related listservs, which are read primarily by people already working in libraries. We submitted requests to post the URL of this survey to every entry on the list of library listservs at <http://www.wrlc.org/liblists/>. That list includes approximately 310 names. While many of these lists were incorrectly addressed or no longer in service, and at least half of those remaining rejected our post on the grounds that we were not individually subscribed to that list, we estimate that at least 100 posts were successful.

This attempt to collect data generated an enormous amount of interest. 1372 responses from different IP addresses were registered, and each poster received at least a dozen unsolicited e-mail inquiries expressing great interest and inquiring regarding the status of the program. This indicates to us that there will be no shortage of interested students for any adequate distance education the department might develop, and that marketing this program to the population we reached will not be difficult. A massive cross posting of the sort we engaged in, accomplishable by a single worker in a single day, would likely be sufficient to fill all the available slots in the program.

However, the population we reached was not, we believe, demographically representative of the GSLIS population at present. Most readers of library listservs are librarians, many of whom already possess MLIS degrees. This contrasts with the figure mentioned in the aforementioned demographic survey given to GSLIS students during the summer of 1999, which found that 88% of our present student population does not have a master's degree of any sort. This means that any marketing effort that relies heavily on submission to listservs will result in a radically different student population than the school has at present. However, we feel that this may be a good thing. These continuing students do not all require the full range of courses that a master's student requires. A partial implementation of Web-based distance education may thus serve this new student population in a manner that it cannot initially serve master's students, i.e., a continuing-education student interested in taking only one or two courses may be able to fulfill her/his needs entirely via Web based education, while the master's students will have to wait until the full range of master's degree courses are implemented in Web form.

The central point of our survey was to gain an idea of how interested respondents were in taking distance-education classes as opposed to traveling to Austin for coursework. Now, since the respondents are a self-selecting group, it stands to reason that this group would include those most interested in the idea of distance education and not include most who would be dismissive of the idea. Further, the fact that these individuals were comfortable enough with computers to be signed up to listservs at all makes it clear that this group is more open to and comfortable with technology than the population of librarians or librarians-to-be as a whole. Still, our results leaned very heavily in favor of distance education.

The answers for the following questions took the form of a 0-4 Likert scale, with 0 indicating no interest in the option proposed ("highly unlikely") and 4 indicating a very high level of interest. While only 70 respondents (5%) reported themselves to be "likely" or "very likely" to move to Austin for at least one year to take coursework (question three), 50% of subjects reported themselves willing (likely or very likely) to take the same classes offered at approximately the same price offered via the Web (question four). Clearly, a large percentage of this group was eager at the prospect of this program coming to fruition.

The survey contained a number of other questions designed to gain more information about this interested population. These data can be used for a number of purposes. If this group is taken to be the primary target group for the marketing of these new distance-education courses, then, if we assume that students will be admitted in a manner that does not end up favoring applicants of particular ethnicity, sex, etc., these data may be used to forecast the future demographics of the distance-education segment of the student population. For instance, according to the summer 1999 survey of students, only 16% were male and 6.6%

were age 50 or over. In our most recent survey, 16% of our respondents again said, regarding their gender, that they were male (3% did not indicate their gender). This most recent survey showed that the age 50 or over population increased to 19%, and this is probably a reflection of the fact we did not target only students.

One might look at other disparities between our data and the data of the older survey (or other sources of demographic data about the department) as a sign that listserv advertising does not reach the department's present target audience. If the university's mission (and hence the department's mission) is to primarily serve the citizens of the state of Texas, then the low number of Texan respondents to our survey (10%) indicates that this method of advertising will not be appropriate, at least if used without supplemental marketing methods. A discussion of possible alternate methods can be found in the section following analysis of the survey data.

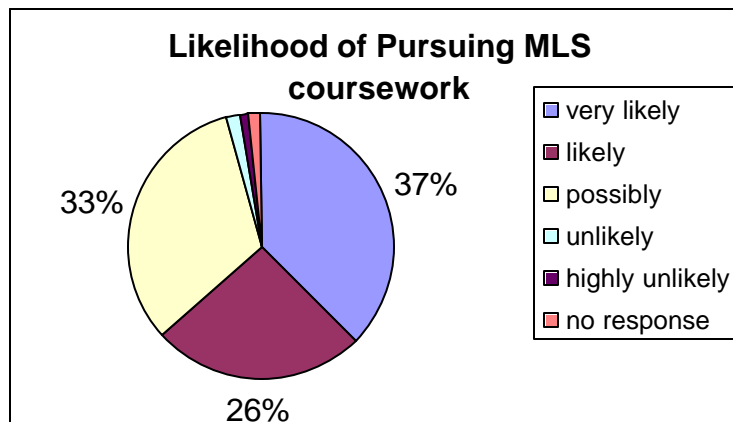
### 1.8.2 Summary and Discussion of the Data Acquired

The following is a summary of the data. Graphs have been included where appropriate, but explicit comparisons of the answers to different questions have been left to the end of the survey, after the presentation of results for the questions taken singly.

Question One:

The MLS degree (Master of Library Science) is presently the standard requisite for obtaining most professional jobs in libraries, archives, and other information agencies in the private or public sector. How likely is it that you might pursue coursework in this area (including continuing-education classes for people who already have MLS degrees)?

We told respondents: "If you answered highly unlikely, thank you for your time; you need not submit this survey." It was included to determine the overall relevance of various responses. If respondents were in general only slightly interested in taking any library-related courses at all under any circumstances, then these would evidently not be the prime candidates for distance-education courses. The relative frequency of the various answers is given in the pie chart below:



Question Two:

Indicate those factors that are presently preventing you from pursuing coursework in this area (check all that apply):

Since these answers were non-exclusive, we have, next to each option below, included the percentage of respondents that chose that reason for not pursuing coursework:

0=lack of time

45%

1=lack of money	47%
2=pursuing another degree	7%
3=family obligations	29%
4=living too far away	64%
5=lack of interest	2%
6=scheduling conflicts	29%
7=graduate school admissions requirements	10%
8=other	11%

Choices 0, 3, 4, and 6 are all factors that potentially might have less impact on someone having a chance to take DE courses. Some 34% of respondents chose at least one of these reasons and did not choose any of the others, making this group the most likely, by this way of reckoning, to find distance education especially convenient. Of course, “lack of time” could mean any number of things, and might indicate not only a lack of time to come to Austin, but also a lack of time to pursue any coursework at all. Choices 3 and 6 are similarly vague; many respondents picking these options might by these reasons rule out distance education as well as traditional education. On the other hand, answers to many of the other questions could indicate problems soluble by distance education. For instance “lack of interest” could indicate not a lack of interest in course material, but lack of interest in the physical procedure of going to school; offering distance-education courses might increase interest. Only choice number 4 presents a problem that could unequivocally be solved by distance education, and only 9% of respondents chose solely this answer in response to the question. While the answers to this question may provide some interesting information that may help to target a marketing campaign, this question taken in isolation cannot tell us how many respondents would be aided by DE. However, it should be noted that of those respondents who specified that 0, 3, 4, and/or 6 were the sole reasons for not pursuing coursework, 55% indicated that they would be “likely” or “very likely” to take Web-based classes if they were offered.

Questions three and four have already been discussed above. Question five, an open-ended question designed to follow up question four, was:

If you had reservations about answering question #3 without knowing more about the details of the distance education option, please list those facts that you feel would be crucial to your decision to take distance education classes.

We received a variety of interesting answers to this that tell us quite a bit about what qualities a distance-education program would need to be acceptable to otherwise eager customers. Of course, if demand for courses greatly exceeds the schools capacity to provide slots, then these concerns can be ignored, but we will assume for the purposes of this report that the school wants to attract the maximum number of applicants, which will in turn provide it with the maximum power to admit only the best applicants, thereby increasing the quality of the student body and hence, presumably, the reputation of the school. The full list of comments submitted (for this and for the other open-ended question, question thirteen) can be found in Appendix C; we highly recommend that readers browse this section to get a real sense of the frequency and variety of various responses. However, we can make a number of general observations here:

For the most part, responses were predictable: Respondents clearly want the services offered via distance-education courses to be comparable to those offered in face-to-face instruction. They did not want to be excluded from student services. Respondents also clearly want the price to be reasonable, which means not substantially more expensive than on-site tuition. In fact, we received several responses saying that they expected distance education to actually be cheaper than on-site education. While it of course seems highly unlikely that the university would consider waiving its out-of-state-tuition requirements for distance-education students, this move would most certainly increase demand dramatically.

Respondents worried about how much equipment they would be required to purchase to access course material. They worried about accreditation. They worried about admission requirements, about how much

time would be required of them, and about the possibility of financial aid. A few students said their participation would be conditional upon their ability to transfer credits to or from our program.

There was much concern over course offerings. While some seemed content with MLIS degree courses, others requested only high-level offerings. Some respondents expressed concern in their own technical competence. Presumably such students would be assuaged by the inclusion of local institutions, e.g. an orientation session on the use of the technology at a local community college, testing center, or even a Kinko's.

We got a number of responses saying "quality of education." It was consistently unclear from such comments whether those respondents were worried about the quality of learning over that medium itself, or whether they merely needed some sort of assurance regarding the talent of the professors involved. However, many more respondents expressed concerns about lack of contact to other students or to the instructor. We trust that any system UT adopts will adequately assuage these fears. However, this must (according to some other responses) be accompanied by an effort to convince hiring institutions that a distance-education degree is just as viable as an ordinary degree.

Many other respondent comments were harder to foresee. Some respondents required that classes be asynchronous, giving them a chance to work on them at their convenience. Other respondents expressed an interest in real-time interaction. Some students expressed preferences in learning style, e.g., "I would consider a class done via video, but not one in which I have to read and write everything. I find I don't do well in classes where a real human being is not the teacher and is not present for questions, encouragement, etc. I do not learn well by reading."

Perhaps the most consistent factor mentioned was that there be few or no resident requirements at all. We have no way of competing the frequency of this requirement, given that the question we asked implied that it would be available. Clearly, though, the purpose of any distance-education program is defeated to exactly the degree to which students are required to eliminate that distance. Should UT decide to offer only some courses on the Web, this will rule out quite a lot of potential customers.

Question Six:

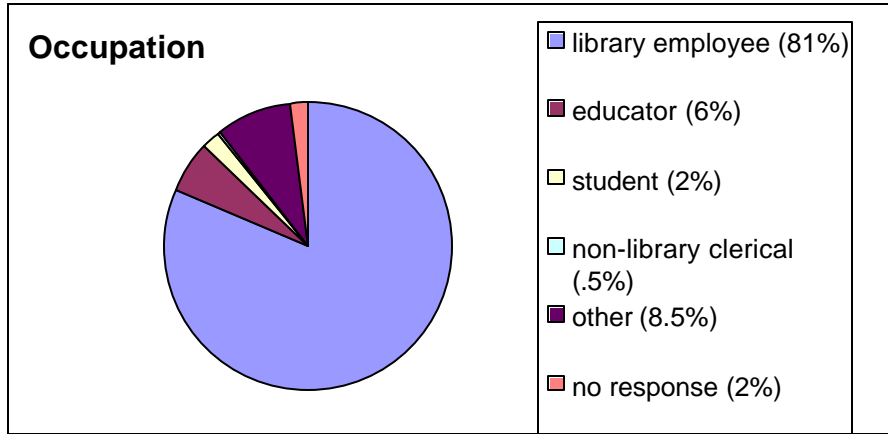
Would you be interested in taking a library or information science distance-education course through the Extension Division of The University of Texas at Austin? (Extension courses do not have admission requirements and may offer conditional course credit towards a degree.)

In addition to these questions designed to determine respondents' level of interest in the program(s) to be offered, we asked six demographic questions, the application of which is suggested near the beginning of this section.

Question Seven:

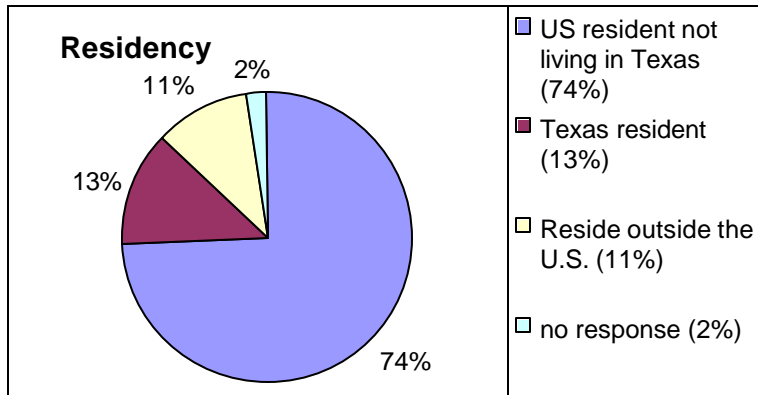
What is your present employment?

The following pie chart gives the percentage of people who answered any available response (including not answering the question at all):

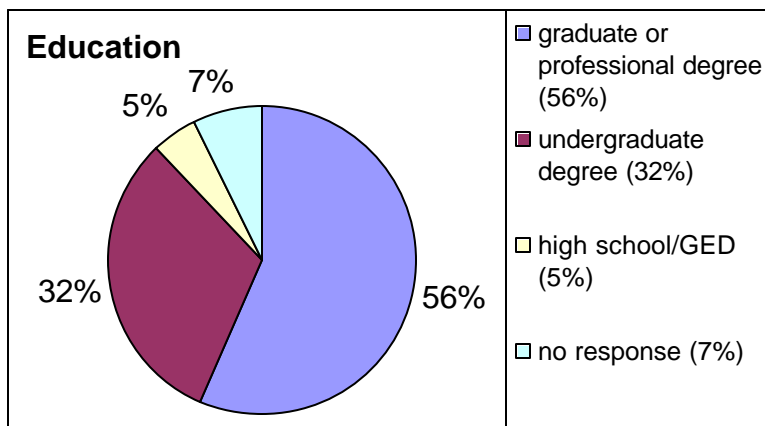


This finding confirms our hypothesis that listservs would reach predominantly library employees.

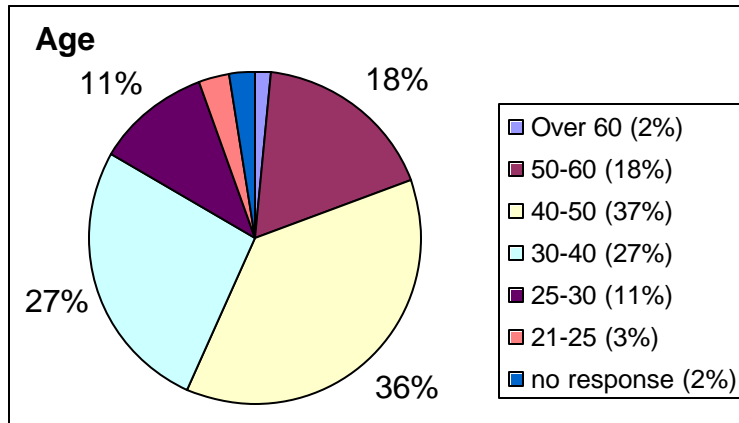
Question Eight: Please indicate which condition best describes you:  
Again, the following pie chart indicates the four possible answers to this question of residency:



Question Nine:  
What is the highest degree you've obtained to date?

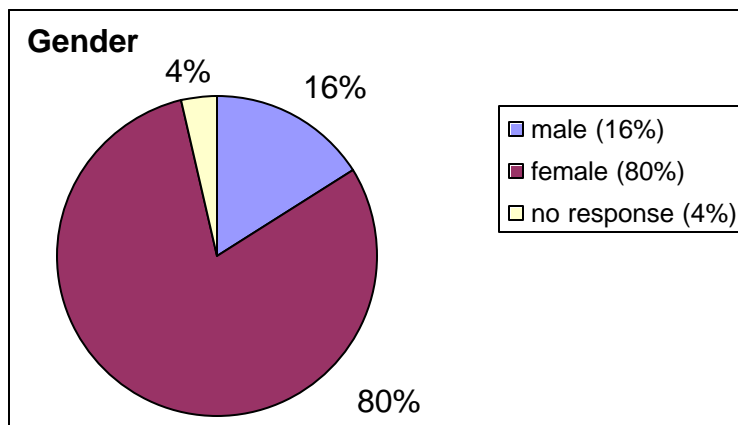


Question Ten:  
Please indicate your age:



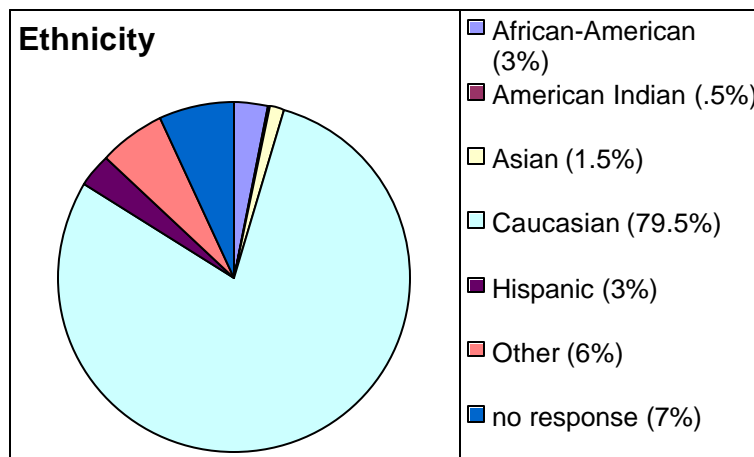
Question Eleven:

Please indicate your sex:



Question Twelve:

Please indicate your ethnicity:



Last, we left an open field saying:

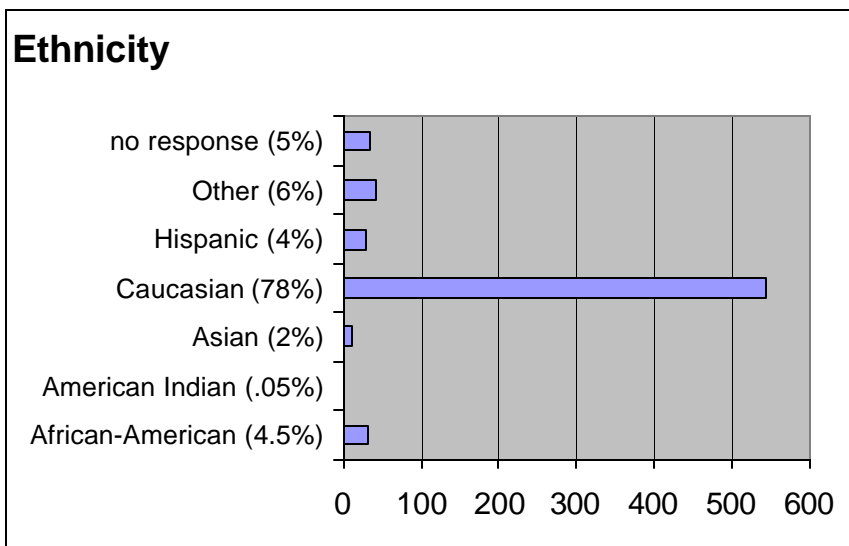
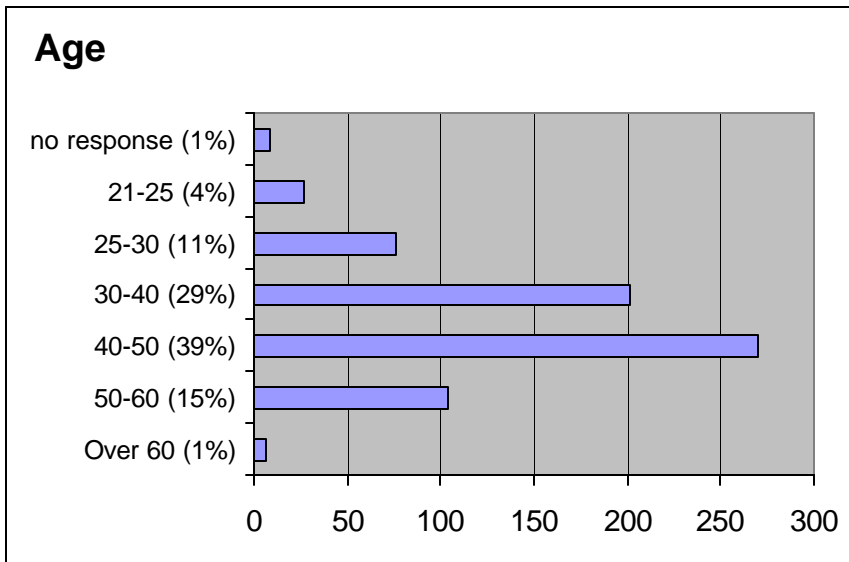
If you'd like to share your thoughts regarding distance education or this survey, please do so here.

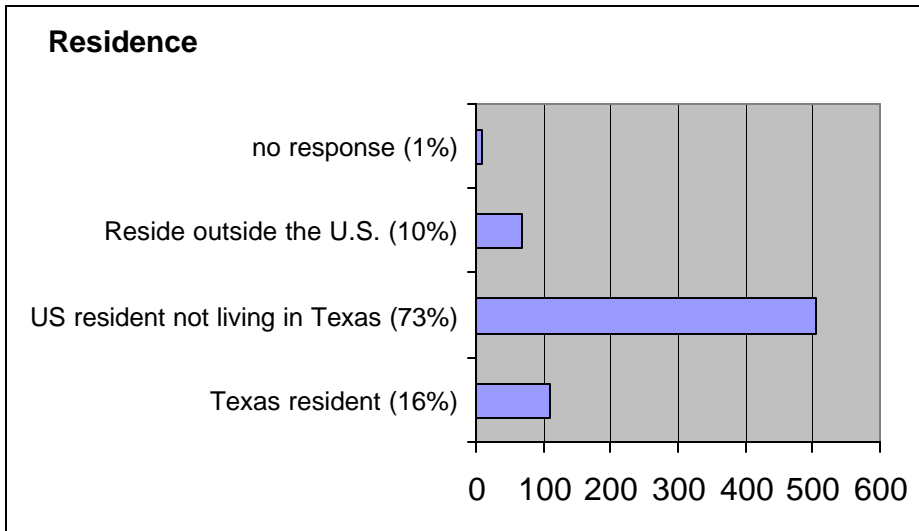
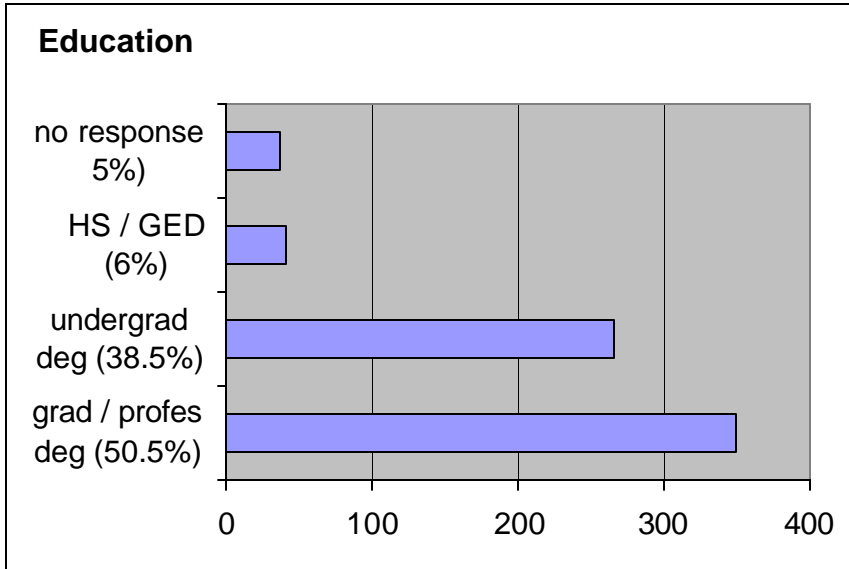
For the most part people who commented here expressed interest in the program or commented on the form of the survey itself. Many repeated or elaborated their answers for the earlier open-ended questions. They

explained the particularities of their situations and why distance education was just right for them. Some person expressed interest in taking Web-based classes from UT-Austin itself. A number of respondents included names and contact information, but these have been deleted for Web publication.

Again, the complete list of these comments has been included for your perusal as part of Appendix C.

At this point we can examine trends across answers to different questions. Below we have graphed the demographics of respondents who have indicated that they would be “likely” or “very likely” to take Web-based classes to further their education (response to Question #4).





There appear to be few significant differences between the respondents likely to take Web-based distance-education courses and those less inclined to do so. As might be expected, there is a slightly greater proportion of individuals holding undergraduate degrees in the high-interest category than in the general population, but individuals with graduate or professional degrees are still in the majority of potential WBE candidates.

The preceding graphs indicating the demographic breakdown of individuals interested in taking Web-based courses provide the proportions and the absolute numbers of potential clients. We have also analyzed each demographic variable independently in order to assess the percentage of individuals within a demographic category who would be interested in taking Web-based courses. This information will be useful for determining interest within a restricted market (for example, among Texas residents). The following table provides by category the percentage of individuals who indicated that they would be “likely” or “very likely” to take Web-based classes if they were available.

**Residency**

62% Texas resident

50%	US resident not living in Texas
47%	Reside outside the U.S.

**Education**

45%	graduate or professional degree
61%	undergraduate degree
62%	high school/GED

**Age**

27%	Over 60
42%	50-60
53%	40-50
55%	30-40
50%	25-30
64%	21-25

**Ethnicity**

76%	African-American
33%	American Indian
58%	Asian
50%	Caucasian
68%	Hispanic
49%	Other

**Occupation**

50%	library employee
62%	educator
56%	student
48%	other
40%	non-library clerical

**Gender**

50%	Female
54%	Male

Our null hypothesis would be that all these numbers should be the same. Were we to find that, for instance, the percentages given for minorities were significantly lower than those for Caucasians, or that females had a much lower percentage than men, this would be cause for those concerned with departmental diversity to consider measures to market particularly toward those minority groups. However, no such disparities occur. In fact, the percentage of minorities (besides “other” and “American Indian” which were lower) was actually higher. It seems no such measures are necessary regarding ethnicity or gender. There are, however, substantial differences regarding age. We hypothesize that these are a direct result of the general comfort level with technology being lower for older people. The only way to address this disparity is to address the issue of target marketing programs to the “technologically challenged.”

This issue will likely need to be considered at some stage of UT’s program development, but not right away. If, as seems the case from the responses above (corroborated by the accounts in the following section), there will be plenty of demand for courses without taking steps to educate those uncomfortable with technology, then we can work with those students first. It stands to reason that as Web-based distance education becomes more common, more people will become educated about it and more willing to try it. At that time we recommend that a study be conducted to determine whether there is still a substantial

disparity in interest by age or technological competence. If so, UT may want to consider initiating some kind of educational effort as part of a marketing campaign at that time.

### 1.8.3 Marketing Advice from Other Institutions

E-mail queries were sent to the individuals in charge of marketing at the on-line programs inviting them to share their marketing strategies with us. Four individuals responded, and indicated that they would be willing to answer further questions. We have therefore included their contact information. Their answers were helpful and detailed enough, yet also specific enough to their individual programs (e.g., Emporia State University is not so well known as Texas, so sending posters to libraries seems more likely to be essential to their program than to Texas's); so we have decided to include only slightly edited versions of their advice before summarizing them in our analysis.

1. From John Ellison, [ellison@cecomet.net](mailto:ellison@cecomet.net), Associate Professor, SUNY- Buffalo, <http://www.sils.buffalo.edu/faculty/ellison/ellison.htm>

Buffalo does not have a full bastion of Web-based courses, but only one professor (our respondent) teaching up to four courses over the Web per semester. His advice is attuned to what will likely be the state of UT during the first year of implementation:

“We post only to listservs and then to about all we can identify in the library profession around the world.

“No [Buffalo is not employing particular strategies to target any demographic groups in particular], just brevity with a link to our DL Web page where they can read the details.

“It is really not a marketing campaign. It works, but there are more people out there who show and interest than sign-up for the courses. Once they see the cost and what is required, they seem less interested.

“Only a fraction of the 2000 people who [answered positively on the survey discussed above] will in fact sign-up for a course. Most serious students want their total program over the Net. Should you develop such, you will attract an audience of serious students.

“I wish Buffalo had more than myself to offer DL courses. Students are crying for the courses, but I am only one person. There are many problems related to offering DL courses over the Net, most of which can be overcome with time and experience.

“Oh yes, interestingly, many students on-campus want to take DL courses. I have found that when given the option, anywhere between 100% to 75% of the students will take the course as a DL class. I have given this option four times so these figures are nearly on the mark.

“Some other interesting observations: Faculty from the library information technology field show little or no interest in teaching DL courses. Faculty who are most critical of DL courses are the least informed about what happens in DL courses. Students often come into DL courses thinking it will be an easy ride only to find the quick exit to the Registrar's Office. Learning the technology and what one does not know about delivering course content are equally as difficult to learn or to admit one must learn. The numbers of students off campus who are willing to take DL courses are just not there unless the school offers a degree program completely over the Net. Other LIS programs really don't want 'their' students taking DL courses from other schools and then transferring the credit into their program. Not everyone should be teaching DL just as not everyone should be teaching, but there are some who can teach DL who should not be teaching in the classroom. There are teaching techniques that can be used in DL that make it a richer learning experience than can be done in the traditional classroom. I have tried to be objective over the years when commenting about DL, but seldom has anyone asked me to be comment. In fact, you may be the first to show an interest.”

2. From Bryce Allen, [isbryce@showme.missouri.edu](mailto:isbryce@showme.missouri.edu), Associate Professor, School of Information Science and Learning Technologies, University of Missouri

The University of Missouri's program is not entirely Web-based, but rather offers some Web-only courses, and more courses with a Web component. As this will likely be UT's situation for the first few years, Dr. Allen's advice is relevant. His comments can be summarized, we believe, as being to the effect that a program such as ours does not need any marketing for Web-based distance education in particular over and above the marketing for its program in general, other than a clear, explanatory Web presence.

"First, some background information. The University of Missouri School of Information Science and Learning Technologies is located in Columbia, MO, a small (pop. 70,000) town midway between St. Louis and Kansas City. In addition to the two major urban areas, Missouri has a number of regional centers, such as Springfield in the southwest and Cape Girardeau in the southeast. This program is the only ALA - accredited LIS program in the state. Accordingly, we feel an obligation to make it accessible to all prospective students in the state, and to a broader catchments area that includes southern Illinois and eastern Kansas.

"The School is located within the College of Education, which has a separate Office of Continuing and Professional Education. It is this office that actually does most of the marketing of our distance education. By distance education, we mean courses taught in the classroom in centers outside Columbia (we regularly offer courses in St. Louis and Kansas City, and less regularly in Springfield and Cape Girardeau), courses delivered by interactive television (usually to the rural parts of the state), and Internet-delivered courses. As a result of our mix of distance-education delivery methods, we have a physical and tangible presence in the major population centers in the state. This presence includes substantial resident student populations, instructors, employers, and facilities. Our database of contacts for direct mail advertising, for example, includes several thousand names of current and prospective students.

"This database has been developed over a number of years by continuous promotion. The most prominent means of promotion have been: direct mail to prospective students, mailing brochures and fliers to employers, advertising in newspapers, and having regular meetings where prospective students can find out more about our program and meet with instructors. Now, a word about Internet courses in particular. We do not have a Web-based program. Rather, we have a number of Web-based courses, and several others that are "Web-enabled": i.e. that use a combination of Internet delivery of instruction and other delivery techniques. As a result, we are not marketing a separate program, but rather marketing a delivery technique within an already established program.

"Let me reflect first of all your own experience. Web-delivered courses almost market themselves. Put another way, assuming reasonably equivalent course quality, it is access that attracts graduate students to courses. Web courses enhance access to a remarkable extent. As a result, the demand is phenomenal. However, there are prospective students for whom the idea of a Web course is somewhat daunting. These students benefit from the institutional presence that we have throughout the state. Using our extensive network of contacts and meetings, we assure these students that there will be appropriate technical support and ancillary instruction where necessary to help them succeed. Again, because we are marketing courses rather than a program, our approach may be different from those of other Schools. But one of our biggest marketing tools is our Web site (<http://www.coe.missouri.edu/~sislt>). Although we recognize that it is less than perfect, we work to make it a mechanism by which students can learn about our program, and about our courses. If you would like to see examples of our promotional materials, I'll be pleased to have a packet sent to you!"

3. From Linda C. Smith, [lcsmith@uiuc.edu](mailto:lcsmith@uiuc.edu), Professor and Associate Dean, Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign

Dr. Smith's comments here reinforce the repeated request from survey respondents that an entire program be offered, not merely some select courses. She includes a wide range of marketing options that have been useful for the University of Illinois, which insofar as it is, like Texas, a large public university, has likely faced the same sorts of challenges that UT will face given a fully-developed program.

“One key point is that ours is a full degree program that can be completed at a distance--so we are marketing to people who want to earn a degree, not just take an occasional course for continuing education (that is an important market, but one that we are not yet equipped to serve in terms of capacity).

“We have not done extensive marketing. We ask each group of admitted students how they heard about the program, and we get a wide range of answers. The strategies below may not all be ‘marketing’ in the narrow sense, but they are ways that we have ‘sold’ our program to prospective students.

“1. Inclusion in any list of accredited LIS programs, with indication of a distance option. Many prospective students use ALA's Web-based list of accredited programs, which includes an indication of whether a program is available from a distance.

“2. Inclusion in any directory (online or printed) of distance programs. Our Academic Outreach (Extramural) office makes sure that we are included when they submit information for such directories and we try to monitor to be sure that information about our programs is included.

“3. Coverage in various media. The UIUC alumni magazine did an article on us, our own school newsletter that goes to alumni includes items about the program, we were featured in the PBS program NetLearning, Karen Schneider described her experience as a guest speaker for one of our courses in her American Libraries column, etc.

“4. Our students/graduates who are enthusiastic about the program recruit others--in responding to listserv messages on specialized listservs (e.g., law librarians) when questions about distance programs come up and in talking with prospective students from their local area.

“5. Speaking engagements--whenever we are invited to speak about the program at LIS meetings, we bring information about the program.

“6. Well-designed Web pages--many students have said a factor in choosing Illinois was that the Web pages were well designed and it was easy to find information about the program.

“7. Targeted mailings--on a limited basis we have mailed brochures about our program to larger public and academic libraries who might have employees interested in pursuing an M.S.

“8. Responsiveness to inquiries--we place a high priority on responding to inquiries about the program fully, politely, and promptly.

“There is still a good deal of skepticism about distance education, so it helps in our marketing to be able to say that we are an accredited program and that we are highly ranked (tied for first in the latest U.S. News & World Report Survey). We emphasize our commitment to quality of the program in the distance mode.”

4. From Daniel Roland [rolandda@emporia.edu](mailto:rolandda@emporia.edu), Director of SLIM Distance-education program, Emporia State University, School of Library and Information Management.

As Mr. Roland explains, his program is not Web-based, it does not need to be marketed to an indefinitely wide audience like ours. Still, the idea of picking a few target geographic areas in Texas, e.g. the areas that we would most like to have expanded the interactive-television courses were funds and interest sufficient to warrant it, and to start promoting the program via some sort of local advisory council seems promising.

“Our marketing plan for distance education probably best fits the category of relationship marketing. We rely on long-term relationships with the professional library community in our market areas, including our alumni, to get the word out about our program. We establish Advisory Councils in each market area comprised of members of the profession and we meet with each Council twice per year. These folks are a great help in getting the word out because they have a vested interest in our success. These folks point us toward marketing events, resources, contacts, etc., as well making sure the word gets out in their individual

library systems and through the state library associations. We develop posters that advertise our program and send to public libraries in the market area. We have developed media kits that are sent to local newspapers, human resources administrators in libraries and corporations. We attend state library association annual meetings, book fairs, etc., with an attractive and informative display unit. We write feature stories on our students and alumni that help publicize the profession and our program. We submit articles to state library and library association newsletters.

“Once people become aware of our program and start to contact us for information, we enter into another element of relationship marketing. We have developed a database that tracks all of our inquiries and allows us to conduct follow-up correspondence in customized and effective ways. Each person that contacts us about one of our programs receives at least two follow-up contacts.

“We do not use any particular strategy to target special groups. We have talked recently with our Grad School about ways to increase minority enrollment. It is important to know that our distance-education program is primarily classroom based. So marketing to the technology challenged is not a consideration.

“I feel that the marketing plan is becoming effective. It has been only within the last 18 months that a budget line item was earmarked for marketing. As far as our distance-education program goes it is hard to get a good picture for comparison. Because of the nature of the program some years we start two new cohorts of students and the next year only one cohort, so the enrollment is like a roller coaster. In 1995, 1997, and 1999 we had admission numbers of 112, 116, and 111, respectively. In 1996 and 1998, admissions were 52 and 45.

“It is also important to know that we relate to our on-campus students in much the same way as our distance program students. 90% of all our students work full-time and attend school part-time. Very few of our students live in the area of our home campus. So we have weekend classes on campus just as we do at our distance sites. The marketing to potential students for on-campus is the same as in the distance program. With that in mind, new enrollments for on-campus increased more than 17% in 1999 compared to 1998.”

## **1.9 Summary and Recommendations**

The Graduate School of Library and Information Science at the University of Texas at Austin can continue to be identified as one of the top ten schools of library and information science in the nation by aggressively accelerating its current efforts to expand its distance-education program into a complete Web-based program. The following recommendations are suggested to assist the GSLIS in this effort:

- The GSLIS should formalize its DE/WBE policies and procedures with a written plan that is adopted by the faculty and administered by the Dean or her representative. This plan should incorporate, reference and adopt elements from the upcoming UT TEL/DE Report and should include faculty incentives to develop and teach the new courses.
- As is suggested by the TEL report, our marketing survey, and subsequent sections of this report, the primary goal of any WBE effort must be high-quality instruction. As such, a comprehensive evaluation of both Web-based and traditional courses should be undertaken. Course evaluations should continue to be mandatory within the department.
- All GSLIS courses shall publish on the Web basic course information including a syllabus and course requirements by the beginning of the Fall Semester 2000.
- The department should establish design standards for its courses and Web presence to create a common “look and feel”.
- The cost of the GSLIS DE program can be offset by new revenue sources. Collaboration with other UT WBE efforts, other universities and ISD’s, the UT TeleCampus, and area businesses can assist with this effort.
- The GSLIS should consider adopting a self-supporting, income-producing model that takes advantage of the demand for continuing education in library and information science. Non-

traditional markets should be explored, including the marketing of modules to associations and businesses and working with publishers who market WBE.

- A DE-marketing director should be hired to lead the program. At a minimum, an instructional designer and graphic artist should also be hired to form a team with current technical staff. It is recommended that this group provide live, online, and telephone support to faculty, staff and students on a scheduled basis.
- Training in WBE, instructional design and teaching via two-way video must be provided to faculty involved with the effort. Initial participation by faculty should be voluntary.
- Current efforts to incorporate the ITESM courses into the GSLIS's own WBE/DE program should continue, as should the design of the six new foundation and gateway courses that will form the basis for the new curriculum.
- The marketing study suggests that the cost to students for WBE should be as affordable as possible and should not exceed the cost of traditional instruction.

By following these recommendations, the School will come closer to both reaching its vision to transform information into knowledge and to change lives and its mission to prepare practitioners and researchers to identify, create and apply effective strategies for connecting people with information.