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3 FACULTY AND STAFF

3.1 PURPOSE

The three main components of a successful Web-based Education (WBE) program are: (1) strong leadership from the administration; (2) sufficient technical and human resources to provide for a solid infrastructure; and (3) faculty willing to risk experimentation (Truman-Davis, B., & Hartman J., 1998). Therefore, it is imperative that the needs of the faculty and staff participating in a WBE program be addressed. It is the purpose of the Faculty and Staff Group to determine the significant issues facing the faculty and staff at the University of Texas at Austin Graduate School of Library and Information Science (GSLIS) with regards to a proposed implementation and operation of a WBE Program. This rationale is accomplished through the investigation of current educational, distance learning, and WBE research and literature. In addition, we sent questionnaires to schools participating in WBE and also to Library and Information Science Schools across North America in order to discover the faculty and staff issues these institutions encountered and how those issues are resolved. Finally, we surveyed and interviewed the faculty and staff of the GSLIS in order to ascertain their attitudes, perspectives, knowledge, and concerns of WBE and specifically a WBE program here at the GSLIS.

This report is divided into two sections: staff and faculty. The staff section details administrative structure, staffing models for WBE, available staff resources, and the GSLIS staff and their views about WBE. The faculty section looks at the role of the faculty in WBE, compensation and incentives, development and training, and the views and concerns of the GSLIS faculty regarding WBE. To conclude our report, we make recommendations for a WBE program at the GSLIS.

There are no simple solutions to the issues facing the faculty and staff. Since WBE is a relatively new and a rapidly developing technology, a dominant model or method has yet to be established. However, as more people and institutions participate in and experiment with WBE, common practices are observed amongst successful programs and practitioners. A clear WBE policy, standards, and expectations must be put into place by the administration of the WBE program. Sufficient and capable staff must be available to support the program. Training programs and other development resources need to be provided to the faculty. Faculty efforts in WBE need to be recognized. The faculty must be aware of the nature of WBE education and their role in this emerging educational medium. Communication and collaboration are characteristics of WBE and therefore should be utilized by all parties - administration, faculty, staff and students - participating in the development and operation of such a WBE program.

3.2 STAFF

There are two broad categories of staff for a WBE program: administrative and technical. A WBE program will not be successful if sufficient staff support is not made available in any of these areas. Faculty must recognize that their efforts alone will not ensure success in integrating technology with distance education. WBE eliminates the model of a faculty member developing a curriculum and course completely on his own and replaces it with a model of collaboration and team work between faculty and staff. It is imperative to provide support personnel, who are experienced with and knowledgeable about WBE, to work with the faculty on course development and operation, as well as to provide appropriate faculty training. Staff engagement is one of the key aspects in the development and success of a WBE program.

3.2.1 ADMINISTRATIVE SUPPORT

The importance of the administrative staff in WBE cannot be overlooked. Their support and guidance help make WBE a functional, student-service-oriented, and goal-centered part of the curriculum. The administration and specifically the college deans are extremely significant in the success of a WBE

program. The dean must establish, articulate, and implement the school's priorities regarding distance education and a WBE program, not only in words but also through actions.

The administration must promote faculty participation in a WBE program. The level and intensity of encouragement should be in accordance with the WBE goals and priorities of the institution. The faculty need to feel that their efforts with WBE will be valued, recognized and rewarded by the administration (Wolcott, L., 1997), otherwise faculty may not be persuaded to participate. Compensatory policies with regard to WBE need to be stated and policies regarding issues such as copyright and intellectual property must be made available to the faculty. The administration should put much thought into the design of the technical infrastructure, staff requirements, and faculty development programs. (Truman-Davis, B., & Hartman J., 1998). It is obvious that the administration is the backbone of a WBE program.

According to Dean Shaffer, the GSLIS currently does not have a written plan for WBE or for distance education. However, the basis for such a plan is the participation of the GSLIS in the ITESM WBE project. The Dean is optimistic about the future of WBE and the ways it can enhance education. Dean Shaffer feels that GSLIS will be able to put more effort into developing a WBE program once the current curriculum revision process has been completed (R. Shaffer, personal communication, October 19, 1999).

While the importance of administrative involvement is definitely agreed upon, the exemplary administrative structure has yet to be determined. This is a topic of much discussion and interest amongst WBE and DE professionals on distance education listservers. A university system-wide or campus-wide entity, such as the UT TeleCampus, can administer WBE, or the school or department, such as the GSLIS can administer the program. The use of a university DE/WBE resource is often used if a school does not have sufficient resources or the means to administer its own WBE program or because the University as a whole has a defined WBE program and policy and encourages the use of these campus resources. A school will choose to administer its own WBE course for various reasons some being: to have total control over its program, there are no directives from the university, an alternate university resource is not available or does not meet the school's WBE objectives. B. Muse of Montgomery College, MD in a contribution to the Distance Education Online Symposium Listserv feels that no matter what the administrative structure of a WBE program, it is the "consensus...that [Distance Learning] will surely fail where its admin [sic] leader does not have access (ready and willing access) to the top administrators of the institution." (Muse, B., personal communication, November 16, 1999) There is no doubt that the long-term success of a WBE program depends on the involvement and influence of its leaders.

3.2.1.1 THE UNIVERSITY OF TEXAS TELECAMBUS

An example of a system-wide program for the administration of WBE is the University of Texas TeleCampus. The UT TeleCampus is a virtual environment built to support distance education on UT campuses across the state. UT TeleCampus brings the courses offered by UT participating component institutions and other resources for students, faculty and staff participating in WBE together online. The UT TeleCampus Master Plan Report says that the purpose of the TeleCampus is to "coordinate and support the delivery of all general revenue-funded credit distance education opportunities by the component institutions. It will provide needed support to component faculty and students, and facilitate the components' contributions to the advancement of knowledge acquisition for Texas residents and students beyond Texas by providing high-quality educational programs." (DE/VUMPO, 1997, p 8) The following is a list of the UT TeleCampus' various responsibilities, including administrative, performed on behalf of the component institutions:

- "Provide to the general public and prospective distance education students a single point of contact and information source regarding all distance education opportunities.
- Maintain the distance education catalog and course schedules. Advertise and promote distance education courses and programs.
- Coordinate courses and degree programs between components that are delivered via technology.

- Enroll all students in state-funded credit distance education courses and maintain the official records for all such distance education courses (i.e., be the distance education registrar for general revenue-funded credit distance education courses).
- Bill and collect tuition and fees for distance education students. (Note: For some students, a local host campus may perform this function.)
- Assist faculty in the development of materials for distance education courses.
- Link faculty and students through an appropriate set of telecommunications including, but not limited to, Web-based courseware, telephone, e-mail, videoconference, courier service, and ordinary mail.
- Provide access to appropriate library materials, academic advising, and other student services.
- Assist programs, units, departments, colleges, and individual faculty with assessment of the need for new or expanded distance education offerings. Facilitate discussions among units and individuals that might benefit from joint development of programs.
- Conduct a “Continuous Quality Improvement Program” to ensure that all UT distance education courses meet and exceed quality expectations.
- Monitor the effectiveness of the distance education effort in achieving UT System goals for distance education.
- Recommend to the heads of the component institutions and the Chancellor policies and procedures to improve distance education within the UT System.” (UT TeleCampus Master Plan Report, 1997 p.9)

3.2.1.2 GSLIS WBE ADMINISTRATION

All of the other North American Library and Information Science Schools that responded to our survey (see section 3.2.4) of various staff and faculty issues indicated that they do not have a special administrative structure for their WBE program. Rather, their WBE programs are under the same governance as their traditional program: the school's curriculum committee, faculty council, and traditional administration. The GSLIS has also decided to pursue administration of a WBE program on its own. GSLIS chose not to use the UT TeleCampus resource due to disagreements pertaining to course ownership and management (M. Rice-Lively, personal communication, November 22, 1999). This being the case, the GSLIS must be aware of and prepared for the responsibilities associated with administering a WBE program. Many of responsibilities of the UT TeleCampus can be tailored to pertain to the GSLIS. The following list is a modification of the stated UT TeleCampus responsibilities as they relate to GSLIS and a WBE program:

- Provide a single point of contact and information source for the WBE program.
- Maintain, develop and coordinate the WBE catalog and course schedules and LIS degree programs.
- Advertise and promote the GSLIS WBE program.
- Assist and coordinate the registration and enrollment, as well as the tuition and fee collection for students participating in WBE.
- Provide faculty with assistance in the development of WBE courses and materials
- Provide WBE technical and pedagogical training for faculty.
- Link faculty and students through an appropriate set of telecommunications including, but not limited to, Web-based courseware, telephone, e-mail, videoconference, courier service, and ordinary mail.
- Facilitate collaboration among the faculty of GSLIS as well as in other disciplines
- Continuously monitor the quality and effectiveness of the GSLIS WBE program. Ensure that the WBE program is meeting the goals of the GSLIS.
- Promote the development of policies and procedures for WBE to the heads of the University of Texas at Austin. (adapted from UT TeleCampus Master Plan Report, 1997 p.9)

WBE Coordinator

Like other LIS institutions, the current administration and administrative staff can carry out many of these tasks. Of course, the dean of the school has an important leadership role, but there must also be a staff member with the responsibility of coordinating and overseeing the WBE program. It seems natural that the person currently in charge of DE at the school would simply change his or her concentration to WBE. In the case of the GSLIS that would be the position of Assistant Dean/Coordinator of Technology currently being

held by Dr. Mary Lynn Rice-Lively. However, in a sizeable or aggressive administering, the WBE program should be the coordinator's sole focus.

Marketing

Marketing and promotion of the WBE program is a task the WBE coordinator will have to address. Depending on the knowledge and resources of the coordinator, a marketing position may need to be created or outside services could be utilized. Marketing has not been a part of the GSLIS, certainly not for the traditional courses but very little marketing has been done for the traditional distance education courses as well. Since WBE is an emerging technology and educational medium, as well as an area in which the GSLIS has yet to establish a reputation, marketing will be necessary to attract students to the program. Also, it should be considered that the WBE courses could be broken up and offered as continuing education sections or sold to other institutions for their training and educational needs (section 1.7 details marketing and target audiences). With skillful marketing, the WBE program could be a source of revenue for the GSLIS.

WBE Modules

One of the many ways a course can be offered through WBE is with the use of modules. One course, LIS 312, is currently being taught at GSLIS using the module model. A module is a portion of the course that is set up to be taught using audio and video technology without having the professor or TA physically present each week to give the lecture. The student will view each module (on videotape or on a computer screen) and perform the work required to complete each module, at his own pace, at a time that is convenient to him or her. The class meets at the beginning of the semester so that the students can become acquainted with the technology and then meets only when exams are scheduled.

Grete Pasch, a doctoral student at GSLIS, has taught LIS 312 for several semesters and feels that the module model has many advantages.

First, instead of developing a whole web-based course, which is difficult with limited financial/time resources, the professor would work with a TA to develop a part or parts of the course as a web-based module. She believes this TA should ideally be a "Ph.D. student who would get:

- experience creating web-based educational materials;
- experience teaching a web-based class; and
- experience expanding an already existing module and adapting it to changing needs.

Thus there would be 'continuity': the course wouldn't be static, but would be 'inherited' by the next generation of TAs who would develop it as needed."

Secondly, by producing these modules, the professor gets experience in implementing web-based DE without having to invest the large amount of time and effort needed to develop and implement an entire course. This experience would then help the professor decide if WBE is a tool that she or he would like to pursue further.

Finally, these modules could produce revenue to further the WBE program by marketing either the individual modules or the entire course. Ms. Pasch believes the market already exists for these modules and suggested that GSLIS could sell them to:

- librarians in the state of Texas, as continuing-education courses;
- librarians in other countries; and
- professors who could incorporate them into their GSLIS course.

Dr. Rice-Lively believes that at least some of the revenue produced by the sale of the ITESM modules would probably go to the faculty-developers to supplement their travel allocation to go the site where the course is being taught (currently \$400 a year). Ms. Pasch suggested that, ideally, the money would be used by the professor who developed the course and by the TA to support their further work on the course and the online tutoring.

At this time the GSLIS department is not marketing course modules, but as more and more courses begin to be taught online, the sale of these course modules becomes an ever increasing possibility.

Student Services

Student services can easily be performed and coordinated by traditional administrative staff positions (see section 4.4 for more detail on student services). Online enrollment and registration are already available to students and the staff frequently communicates and works with students remotely. Academic advisors are able to communicate with students via e-mail, real time chat, or simply over the telephone. Unless the program is very large there is not necessarily a need for exclusive WBE administrative staff. However, the increase in students may weigh on the already heavy workload of staff members who have multiple job responsibilities. One administrative staff member who responded to our survey (see section 3.2.6) indicated that she was concerned about how her workload would increase. What is at present simply an additional task to her main position could turn into a major full time duty if the WBE program significantly increases the number of GSLIS students. In this case, creating a staff position to handle a specific service for both traditional and WBE students, such as financial aid information, could be effective in lessening a heavy workload. An interesting solution is suggested by B. Bleck, Director of Distance Education at the Community College of Southern Nevada, in an email he posted to the Distance Education Online Symposium Listserv (DEOS-L). His school has implemented what they call a “cyber-counselor”. This counselor is responsible for responding to all students, WBE and traditional, requesting information electronically (B. Bleck, personal communication, November 24, 1999). Top administration officials must be aware as to how WBE is affecting the workload of the administrative staff and should act accordingly by adding new positions or modifying responsibilities in order to produce a happy and productive workforce which in turn contributes to the success of the program.

3.2.2 TECHNICAL SUPPORT STAFF

There are various WBE technical staff models, but most have a team approach in common. That is, staff-support for WBE is made up of members of a team who work with the professors. The team approach gives structure and consistency to a WBE program and provides necessary support to the participating faculty and students.

The staff team model used by the University of Central Florida consists of subject matter experts (faculty), instructional designers, programmers, and graphic artists (Sorg, S., Truman-Davis, B., Dziuban, C., Hartman, J., & Juge, F., 1998). Students and full-time employees staff these positions. The division of labor achieved in the staff team model approach frees faculty members from the technological requirements of WBE and allows them to concentrate on teaching and learning in the Web-based environment.

The staff team is supported by the IT staff responsible for maintaining the technical infrastructure for the WBE program.

Staff involvement is needed at every step of the development process. Significant points in the development process are:

- Hardware and Software Selection;
- Costing and Budgeting;
- Curriculum/Knowledge Conversion;
- Knowledge Content and Instruction Design;
- Knowledge Management, Testing and Certification;
- Coding and Formatting;
- Program Testing and Debugging; and
- Final Product Release and Feedback.

3.2.2.1 WBE SUPPORT STAFF

The WBE support staff team interacts intensively with the instructor during the Web course development process. It is necessary that the support staff understand the course objectives and materials so that they can identify the most appropriate approach for the course in terms of WBE delivery and pedagogical effectiveness. The staff must then design the course taking into account the appropriate approach, specific requests by the faculty member, and institutional standards. If possible, several types of environments should be developed to give the instructor options. Based on the instructor's preferred choice, the staff will revise the course, retaining those technologies with which the instructor feels most comfortable and improving or eliminating those technologies with which the instructor is not comfortable. In this way, the course development staff will design a Web course that satisfies the instructor, as well as the standards of the institution.

The WBE support team is basically made up of an instructional designer, a programmer/Web designer, and a multimedia/graphics designer. The instructional designer helps the professor evaluate and implement the most appropriate course design for the curriculum and course objectives. The programmer will take the design and produce it on the Web. The multimedia expert applies her specific knowledge and skills to the creation of the course. Support for the course also comes from teaching assistants. In WBE the teaching assistant is often the bridge between the instructor and the students, as well as between the instructor and students and the technical support staff. TAs help students to solve problems with the class content as well as with the media used to deliver the content. Designing and operating a Web course is a team effort, and a minimum of five team members are needed: the content specialist or subject expert (most often the faculty member), the instructional designer, the programmer/Web designer, the multimedia/graphics designer, and a teaching assistant. As a team, the WBE support staff will provide a consistent core for WBE development and operation.

3.2.2.2 IT SUPPORT STAFF

The IT support staff maintains the technical infrastructure of the WBE program. In the course design process, the IT support staff assists in choosing the appropriate equipment and software according to the requirements of the institution's WBE program standards, as well as the instructional and design approach chosen by the WBE support staff. Prior to the course delivery, IT supports installs and tests the software and equipment. IT support must be available to do any troubleshooting. IT support staff can also help students with their technology problems. However, the instructors and teaching assistants should also have some knowledge about and be familiar with the Web-based environment, as well as have some experience with the telecommunication system so that they are able to assist the WBE students also. The necessary IT staff skill requirements and positions vary with the kind of technology used in the WBE program. For a more detailed description of the IT staff needed for various technical models, see section 5: Technology.

The IT support staff are also responsible for the technical training of other staff and faculty members. The training can vary widely from teaching faculty members the basic computer skills required to participate in WBE to providing faculty who already have computer expertise the skills to advance further in their knowledge. The training courses should also give the instructors and faculty members experience and practice on telecommunication systems and with WBE technologies. With help from the trainers, faculty members are able to identify the appropriate WBE technologies and teaching strategies for their courses as well as build their technical skills.

3.2.3 STAFF SUPPORT RESOURCES AT UT

The University of Texas at Austin provides a wealth of resources to college faculty, students and staff. There are resources focusing on IT services and teacher training that are particularly useful to those participating in WBE.

3.2.3.1 ACADEMIC AND COMPUTING INSTRUCTIONAL TECHNOLOGY SERVICES (ACITS)

ACITS provides a wide array of services to the various schools at UT Austin. A school can contract with ACITS to provide support for its staff and faculty. With this type of contract ACITS staff are actually housed within the college to which they provide their services. Most of the other services provided by ACITS are offered to the entire University. These services include, but are not limited to:

- Help Desk support and consulting on applications;
- Internet access through UTNet and Telesys;
- E-mail accounts;
- Training and documentation on systems;
- Discounted software;
- Web publishing;
- Timesharing systems for research computing, personal Web publishing and programming; and
- Support for faculty through the Center for Instructional Technology.

The ACITS staff pay scale, types of positions, and how they are staffed are a common example of what to expect for technical staff:

- Professional technical staff – serves as programmers, systems administrators, and network analysts. Mostly full-time, salaries range from \$30,000 at the low end to \$70,000 at the high end.
- Paraprofessional technical staff – works at the Help Desk, provides assistance in computer labs, and supports the professional technical staff. Generally part-time students, they have hourly salaries ranging from \$8.00 to \$14.00 per hour.

ACITS provides two useful services for WBE course development: specialized consulting services and training. ACITS staff are available for consultation regarding problems related to visualization, information design, networks, and instructional technologies. In the area of visualization software, staff can help instructors or faculty members with software for imaging and image processing, creating animation files, 3D rendering, and other functions related to interactive and immersion visualization. Information design consultation includes topics such as Web design, visual communications software and Web-related tools, layout, fonts, scanning, and other topics related to online publishing. Staff members can help users plan Web-publishing projects, develop templates, and select software appropriate for the users' needs. ACITS staff also help users with problems related to the campus computer network.

ACITS conducts training seminars for instructors and faculty members. The ACITS Website includes a faculty resources page. From this page, faculty members and instructors can receive all kinds of training. The faculty technology seminars present innovative uses of computing and multimedia technology in the classroom. They provide faculty the opportunity to explore the possibilities of and experiment with implementing new technologies. ACITS also introduces helpful WBE hardware and software tools to faculty members. Faculty training guides and the upcoming Center for Instructional Technology's Faculty Trends focus on new technologies and promote the instructional potential of the World-Wide Web. There is also development of an online resource to foster production of multimedia instructional materials in order to support WBE. WebCT seminars offered by ACITS introduce faculty and others to the Web course development tool, WebCT.

3.2.3.2 CENTER FOR INSTRUCTIONAL TECHNOLOGIES (CIT)

ACITS maintains the Center for Instructional Technologies (CIT) which provides resources designed to support the instructional technology needs of instructors and faculty members. The resources keep faculty in touch with the newest developments in Web-enhanced and Web-based instruction. CIT also provides customized training for faculty and staff working on projects involving information analysis and Web design, interface design, instructional design, multimedia tools and Web course development tools. The Center offers individual consulting to faculty in the areas of multimedia, information and Web design, Web

course development tools, instructional design, distance education, visualization, and emerging technologies. The CIT staff can help faculty to formulate a design and framework based on course content.

3.2.3.3 CENTER FOR TEACHING EFFECTIVENESS (CTE)

Another resource at UT Austin is the Center for Teaching Effectiveness. Since 1973 the Center has been providing faculty and staff with information about the processes of teaching and learning. Their mission statement says that their primary purpose is to “assist the teaching staff...in providing instruction that is consistent with the best information on quality teaching and learning at the post-secondary level.” (CTE, 1998) While the Center for Teaching Effectiveness is concerned with teaching in general, it does offer some programs for those instructors incorporating technologies into their course delivery media. Currently the Center’s activities relating to WBE include *Teaching with Technology Workshops*, which are held in conjunction with the campus Computing Center, and *Technology Support*, which assists in designing effective uses of technology in teaching.

3.2.4 OTHER RESOURCES

3.2.4.1 ONLINE RESOURCES

There are considerable WBE resources for the faculty available on the World-Wide Web. As the demand for the information increases, these resources will continue to multiply. Also, it is only natural that the sharing of WBE research and resources will be done online. Many DE/WBE instructors and innovators publish their research and WBE experiences online. Websites like the University of Wisconsin’s Distance Education Clearinghouse (<http://www.uwex.edu/disted/home.html>) are a source for academic articles, resource directories, conferences, agencies, journals, and much more pertaining to distance education and WBE.

Faculty can become members of listservs, discussion groups, message boards, news groups, and other resources dedicated to distance education, WBE or any other topic of interest. These technologies allow peers to share their knowledge and experiences and promote discussion and collaboration. Also, the use of these resources allows the professor to experience and work with these technologies and be better prepared for their use in the online classroom.

3.2.4.2 STAFF OUTSOURCING

Due to the highly skilled and highly technical nature of the staff needed for WBE, outsourcing would not be economically viable. The GSLIS and the University already has an abundance of competent, enthusiastic, and relatively inexpensive staff resources in its students. Student employees do not necessarily need to come from the GSLIS but rather can contribute their knowledge of other disciplines, such as business, computer science, and education, to the program initiative. It is much more cost-effective to utilize the University’s existing resources such as the ACITS and CTE, as well as student employees. Also, this practice promotes collegiality and collaboration within the University.

3.2.6 SURVEY OF LIS SCHOOLS IN NORTH AMERICA

In order to gather information from other universities offering graduate studies in Library and Information Science, we sent a questionnaire, via e-mail, to library schools throughout North America that have a Web presence. We asked for responses whether or not the school currently has a WBE program in operation, assuring them that their input would be helpful regardless, as we wanted to know the issues other schools were encountering in the WBE planning, development, and operation processes. We sent out 33 questionnaires and received seven responses (see appendix C for the questions and responses). Respondents indicate that schools are grappling with policy issues such as faculty and staff training and

copyright law, as well as how to provide support and compensation for faculty in the design and development of Web-based courses. They are also concerned about the effects that WBE will have on students and the quality of education they receive. With the exception of one respondent, all of the library schools that answered our questionnaire were either planning for or had already implemented some level of Web instruction at their school. The following is a detailed summary of their answers.

What are some of the major faculty and staff concerns and problems you have encountered with regards to your WBE program? How have these concerns and problems been resolved?

One university responded that they offered a "number of courses leading to the MLIS via the Web." (Appendix C) This institution saw these courses as a "logical continuation" where newer technology was being used to offer for-credit courses via several different Distance Education mechanisms around their state and surrounding states. This respondent noted that a school committee had been formed to identify key issues and concerns and to access the various software configurations. Among the key issues: (1) intellectual property rights and ownership; (2) workload implications; (3) technical support; and (4) general pedagogical/quality concerns. Two institutions responded that they were just beginning to offer courses via the Web and found that the faculty were overwhelmed by the enormous amount of time needed to develop a course. One of these schools felt the problem had been resolved by the granting of release time. Two other issues brought up by other respondents were: (1) the availability of library resources at the student locations/more textbooks being used due to lack of accessibility of other materials; and (2) the lack of communication between the student and the professor. Students are concerned when they cannot communicate with a real person.

What type of staff support does the faculty have for the development, design, and operation of WBE courses? What are the various staff roles and positions associated with the WBE program? (Ex.: professor, webmaster, instructional design technician) Do students or full-time employees staff these positions?

One institution responded that their school had a full-time professional staff available to assist in the development, design, and operation of their WBE courses. Two universities had at least one full-time professional to aid faculty with WBE courses. Of these two schools, one had a staff member who was a full-time Distance Education Coordinator with an MLIS degree and had considerable knowledge in instructional design techniques using new technologies. The coordinator's duties included: (1) assisting "the faculty to configure, mount and operate their Web-courses" (Appendix C); (2) assisting with any technical problems; and (3) introducing the faculty to new technologies that will enhance their classes. The other school responded that their expert was a faculty member who acted as the curriculum design expert. Two other staff positions supported this faculty member, a "technology expert" who serves as the school's Webmaster, and student assistants to scan materials and update Web site input. A full-time technician and a student Web-master were on staff at a fourth institution. Of the other universities responding, one school was supported by the central academic computing division and the other with graduate assistants. The latter school noted that they would have a full-time person in the area of Web design in the spring of 2000.

Upon which model or method does your school base its WBE program?

Several respondents either did not know how, or chose not, to answer this question. Of those that did respond, two used WebCT software. A third respondent currently uses CourseInfo, and another uses TopClass software to provide Web links and sound to their courses. The last school also mentioned that their model "is to supply information which would be regularly delivered in a class context...we supply students with password secured email and discussion groups" but do not use chat rooms.

How are the faculty and staff members trained in WBE technology and delivery/teaching methods?

Two institutions responded that while their universities offered short training courses, most of the faculty was basically self-taught. A third responded that they had applied for funding so that the faculty could attend a training institute. Two schools provided training for the faculty through either the central academic computing facility or the University's Center for Instructional Design and Distance Education

(CIDDE) program. The CIDDE provides a "full-service staff to train and support faculty and staff "in WBE technology and delivery/teaching methods. The institution that has a full-time Distance Education coordinator responded that training was supplied by the coordinator either on a one-to-one basis or through workshops. In addition, it was mentioned that the school has a "major resource center dedicated to introducing faculty to and assisting them with new teaching technologies." The sharing of information between faculty new to teaching WBE courses and those that have had experience with WBE courses was also noted as an important factor in the success of the training program.

What additional compensation does the faculty and staff receive for WBE participation?

Three universities responded that there was no additional compensation for WBE participation. All other respondents provided release time (at least 1 course per semester) for faculty participation, with one institution supplying an additional financial stipend for the WBE summer courses.

How are the objectives of the WBE program monitored and maintained? What is the governing body of the WBE program?

Of those institutions that answered this question, four respondents stated that the governing body included the curriculum committee, the dean, and the faculty. At these institutions there was no special administrative structure to oversee the program. Course evaluations by both students and peers were mentioned as being part of the regular process in monitoring WBE courses. A fifth respondent noted that their program received additional scrutiny by the Distance Education coordinator and the school administration. However, this school also used the same evaluation techniques as the other institutions.

Please include any additional comments specifically concerning faculty and staff or generally concerning WBE.

The comments included:

- "Our Web-based courses will include elements of 2-way video/audio conferencing."
- "Our current DE effort is primarily compressed video. Our first two pure WBE courses are scheduled for next summer."
- A study is currently being conducted of WBE courses at this institution. One concern expressed "is the impact on and implications for students who are taking Web-based classes."
- "Many of the current course offerings are not conducive to WBE. We are looking at ways to bring continuing education offerings to the Web rather than master's-level courses."
- "WBE is very time intensive for faculty since students have all-the-time access to faculty through email and discussion groups."

One final respondent who chose not to answer the questions stated:

"The answer at (our) GSLIS is short at this point. Right now the faculty feel that the classroom and the student interaction in the class are important. So, while classes may be augmented with WBE, we do not offer web-based classes. Things could change..."

3.2.7 WBE STAFF RESOURCES IN OTHER INSTITUTIONS

The following is a list of schools and departments participating in WBE who responded to a survey about their staff structure. The purpose of the questionnaire was to obtain more detailed information about the staffing practices utilized by institutions participating in WBE. Sixty-three surveys were sent via email and 17 institutions responded. See appendix 3.D for the questions and responses. From the variety of staff models used by other institutions participating in WBE, it is obvious that the kind of staffing used depends on the school's resources and/or WBE objectives. By examining the staff used and gaining an understanding of the costs and resources involved, a school can better prepare itself for WBE staffing decisions.

The Catholic University of America, School of Library and Information Science

University resource:

- **Central Academic Computing WBE training staff**
 - Full-time professionals; \$40,000 - \$60,000/year

Louisiana State University, School of Library and Information Science

School resource:

- **Computer resources coordinator**
 - Full-time; \$32,000/year
- **Graduate Assistants**
 - 12 hour Graduate students; \$500/month
 - 20 hour grant Graduate students; \$1000/month

University resource:

- **Faculty Development Center Staff**
 - Assistance available upon request from school

North Carolina Central University, School of Library and Information Science

School resource:

- **Information Resources and Technology Manager**
 - Full-time; \$60,000/year
 - Part-time Graduate student assistants; \$30,000/year

University resource:

Teaching and Learning Center Staff:

- **Instructional Designer**
 - Full-time; \$40,000 - \$48,000
- **Systems/Network**
 - Full-time; \$40,000 - \$50,000
- **Server Manager**
 - Full-time; \$38,000

University of North Carolina – Greensboro, Department of Library and Information Studies

School resource

- **Assistants for Administrative Secretary**
 - Part-time Graduate students
- **Teaching Assistants**
 - 20 hour graduate students

University of Wisconsin at Milwaukee, School of Library and Information Science

School resource:

- **Distance education coordinator**
 - Full time professional with an MLIS degree; approximately \$35,000/year
- **Assistants for distance education coordinator**
 - Part-time Graduate students

University of Alabama

School resource

- **Associate director**
 - In charge of online program
- **Web masters for online courses**
 - Part-time graduate students; minimum wage with six month increases

Texas A & M University - Commerce

University resource:

Instructional Technology Department Staff:

- **Director of Instructional Technology department**
- **Instructional designer**
- **Software/technology specialist**
- **Technology support coordinator**
- **Administrative assistant**
 - All full time positions; \$30,000 - \$35,000/year

Department of Computing, Telecommunications, and Information Systems Staff

- Support networking problems

Request for new position:

- **Student support services coordinator**
 - Will be the “personal contact” for WBE students

University of North Texas

University resource:

Center for Distributed Learning:

- **Associate Vice President of Distance Education**
 - Part-time
- **Associate Director**
 - Full-time; \$53,000
- **Instructional Designer**
 - Full-time; \$35,000
- **Instructional Consultants**
 - 2 Full-time; \$33,000
- **Instructional Programmer**
 - Full-time; \$35,000
- **Instructional Media Specialist**
 - Full-time; \$32,000
- **Student Assistants**
 - 7 Part-time students; \$8 - \$10/hr
 - Duties include programming (HTML, Dynamic HTML, JavaScript, and Java,), text editing and placement, graphic design, layout, illustration, photo and audio/video shoots, audio/video capture and compression.

3.2.8 CURRENT GSLIS STAFF POSITIONS

Within the GSLIS department, there are a number of key personnel who assist the faculty by implementing new technologies and by supporting the current academic and administrative computing and multimedia

services. In addition, there are several part-time and student positions which also support the growing Information Technology staff. The following is a list of the staff positions currently being held by GSLIS staff personnel.

Full-time personnel:

- Assistant Dean and Coordinator of Information Technology
- Systems Analyst/Systems Administrator
- IT Lab Teaching Assistant
- Computer Systems Development Specialist
- Information Analyst

Part-time personnel:

- Administrative Assistant
- Accountant
- Director of Development

Student employees:

- Student Assistant
- Student Associate
- Senior Student Associate

3.2.8.1 DESCRIPTIONS OF FULL-TIME STAFF POSITIONS

Assistant Dean and Coordinator of Information Technology:

At this time Dr. Mary Lynn Rice-Lively holds the position of Assistant Dean and Coordinator of Information Technology. Her duties are to:

- Plan, manage, and support GSLIS academic and administrative computing;
- Oversee implementation of new technologies;
- Coordinate the preparation of internal/external reports on strategic and project planning (IT initiatives and academic research);
- Oversee operations of the IT Services and Distance Education Programs;
- Hire, supervise and evaluate:
 - UNIX Systems Administrator;
 - Information Analysts;
 - Computer Systems Development Specialist (CSDS);
 - Senior Administrative Associate; and
 - Teaching Assistants in the IT lab (collaborating with CSDS, Systems Administrator and Information Analyst).
- Coordinate Distance Education Program;
- Review and revise information catalog; and
- Serve as co-chair of the Technology Planning Committee.

Dr. Rice-Lively also has other duties including: (1) working with faculty to develop research initiatives and proposals; (2) overseeing the planning and implementation of the academic course schedule and; (3) representing the Dean at select meetings and special events.

Systems Analyst/Systems Administrator:

The duties are to:

- Install, evaluate and upgrade server software to support GSLIS Internet and Intranet services;
- Maintain systems;
- Write custom software;
- Manage and support user accounts;
- Support lab users; and
- Carry on security and administrative duties.

IT Lab Teaching Assistant:

The duties are to:

- Coordinate and oversee library-related applications and resources including:
 - OCLC;
 - Cataloger's Desktop;
 - MitiNet MARC;
 - Book collection;
 - Faculty instructional IT support;
 - Web site maintenance; and
 - Multimedia, short courses and tutorials.
- Set up classroom demonstrations;
- Maintain hardware;
- Support IT lab users;
- Check-out reference materials; and
- Teach short courses.

Computer Systems Development Specialist:

The duties are to:

- Support the students, faculty and staff in computer and Internet use;
- Maintain, upgrade, and troubleshoot computer hardware and software;
- Assist in the hiring and management of IT Lab staff;
- Install and evaluate software applications;
- Handle faculty requests with regard to course delivery; and
- Perform various administrative duties.

Information Analyst:

The duties are to:

- Provide communication, organization and technical skills in the development of Web-based course information systems by:
 - Documenting the needs of students and faculty in designing and delivering Web-based courses;
 - Acting as Application Specialist;
 - Installing, evaluating, and upgrading course development applications;
 - Answering general questions of students, faculty, and staff; and
 - Performing GSLIS technology support and administrative tasks.¹

3.2.8.2 DESCRIPTIONS OF PART-TIME STAFF POSITIONS**Administrative Assistant:** (Half-time - \$20,076 to \$38,700 annually for full-time)

The duties are to:

- Make travel arrangements for faculty and staff;
- Maintain travel records for faculty travel allotments;
- Prepare travel requests and vouchers;
- Process Dean's mail for Executive Assistant;
- Maintain administrative filing system; and
- Back-up receptionist.

Accountant: (Half-time - \$28,284 - \$55,548 annually for full-time)

The duties are to:

- Prepare financial reports and spreadsheets;
- Reconcile all accounts;

¹ All full-time staff information provided by Dr. Mary Lynn Rice-Lively.

- Identify cost sharing entries for PCS;
- Serve as member on financial team;
- Code accounting entries;
- Create and review annual budget (with Dean and Executive Assistant); and
- Prepare awards worksheet for creator of electronic documents.

The accountant is also responsible for: (1) transferring funds between accounts, (2) reviewing departmental coding schemes, and (3) preparing financial sections of the annual ALISE report.

Director of Development: (Half time - Salary determined by dean or vice-president)

The duties of the Director of Development are to plan the school's development agenda in collaboration with the dean.

3.2.8.3 DESCRIPTIONS OF PART-TIME STUDENT EMPLOYEES

Student Assistants: (average 10 hours a week - \$5.91 - \$9.73 per hour)

No specific job description. Depends on work assignment.

Student Associates: (average 10 hours a week - \$7.11 - \$11.40 per hour)

No specific job description. Depends on work assignment.

Senior Student Associates: (average 10 hours a week - \$8.16 - \$13.36 per hour)

No specific job description. Depends on work assignment.¹

3.2.9 SURVEY OF GSLIS STAFF

In order to get more detailed information about their opinion of WBE, we distributed a survey to the GSLIS teaching assistants and staff members. We also interviewed certain staff members as well. The questionnaire was posted on several GSLIS electronic mailing lists that reached staff members. We received eight replies from the staff survey, five from teaching assistants, and three from administrative staff members (see appendix A for the questions and responses). Seven staff members were interviewed: two teaching assistants, two technical support persons, and three members of the administrative staff.²

3.2.9.1 ADMINISTRATIVE STAFF

Experience with WBE

Of the administrative staff members who were interviewed or who answered our surveys, only one member has had experience as a planner, producer and facilitator in WBE. Another member, however, has taken Web-based courses as a student and thinks it is a great study option. Two other members have no experience with WBE.

Dr. Mary Lynn Rice-Lively, Assistant Dean and Coordinator of Information Technology replied to our survey. She sees her role as encouraging and supporting the development of WBE by identifying financial and human resources. Two other members of the administrative staff (one involved in student information and the other with financial aid and academic awards) see their roles as student advisors and coordinators. Yet another staff member is not sure of how her role will be affected by a GSLIS WBE program.

¹ All part-time staff and student employee information provided by Melba Claymon.

² Some staffs and teaching assistants participated in both the survey and the interview. In this case, they were counted twice

Only one administrative staff member is familiar with and/or has had experience with UOL, WebCT, HTML, and a variety of Web editing programs. Two others say their work does not require such technology. Still another is taking a Web-design course now and will continue to take some programming courses later.

Views and Concerns

All members of the administrative staff endorsed the idea of WBE. Two staff members thought that WBE would create an opening for GSLIS to recruit more students. One member suggested that WBE would “enhance learning options for students and move instructors from the ‘talking head’ to more of a ‘facilitator of learning’ and, further, that courses should use the most appropriate technology according to different instructional objectives.” (Appendix A)

Concerns expressed by members of the administrative staff include problems in admission, registration, advising, and administration. They question how to handle the extra work caused by WBE students. For example, if more students are eligible for financial aid or academic awards, more paper work needs to be done. One member also pointed out that she would not have much personal contact with the students. Dr. Rice-Lively is concerned about the danger of developing "one-size-fits-all" courses and the resultant loss of socialization among students into the profession.

In terms of compensation, almost all respondents say there should be fair compensation for the work done for WBE. Some suggest equal or greater pay than that given for a traditional course.

3.2.9.2 TECHNICAL SUPPORT STAFF

Experience with WBE

Of the 13 technical-support staff members and TAs who were interviewed or who answered our surveys, most have had some experience with WBE. One member helped to develop LIS 312 into a Web-based course. Three others have worked as teaching assistants in Web-based courses. One helps to put course material onto the Web, one designs Web-based interactive quizzes, and the third works as technical support to troubleshoot problems with WBE courses. Two other members have participated in developing Web-based technical tutorials, and a third had experience in designing distance education projects and working as a TA for a distance education course that utilized interactive television. In general, this group admitted they are still trying to figure out how GSLIS is going to implement a full-scale WBE program and what kind of model the school will adopt.

The roles of teaching assistants are focused more on the areas of technical support, such as (1) facilitating Web course development, (2) guaranteeing the availability of network resources for students and faculty, and (3) developing Web-based tutorials. The teaching assistants in the Information Technology lab are also in charge of installing appropriate software, establishing connections between remote sites, troubleshooting individual systems, and hooking up microphones and video cameras. Teaching assistants to Web-based courses are responsible for replying to e-mails, grading online assignments, and helping students in understanding the material and using the computers. One TA thinks the WBE team needs to consist of a production person doing the HTML, a video and graphics producer, an assistant to the students (1 assistant per 20-30 students), assistants that will be onsite at the remote locations, an instructional designer, and the professor.

In terms of the technology: while one of the teaching assistants feels comfortable producing materials using all the WBE technologies, another is not very comfortable and thinks that there are still many techniques he needs to learn. Eleven of the thirteen teaching assistants know about current WBE software. Some think that they functionally understand various WBE software and are familiar with most of the applications. Others say that they are familiar with public but not proprietary software.

Views and Concerns

The technical support staff and teaching assistants generally approve of WBE. They think it is important and has significant advantages, which will provide more educational opportunities to students. One teaching assistant thinks that WBE is a concept and technology that is still in its infancy. One of the technical support staff strongly endorses WBE. He thinks that "listening to the lecture in front of a blackboard is not always the best way to learn. A student who has to be at a certain place at a certain time is under stress, especially when one is working and has a family. Also in a classroom environment, if a professor gives the presentation and a student takes notes, unless he or she takes really good notes, when some one else asks a question he or she will lose the presentation, lose the question that was asked, and lose the answer that was given. In an on-line environment, on the other hand, a student can juggle listening, note taking, and questions asked of the professor." (Appendix A) In the matter of interaction, he argued against the suggestion that WBE offers less interaction than traditional courses. He feels that there is hardly any interaction in any class with over 20 students because it is impossible to have any kind of give-and-take in a classroom with such a large number of students. Another TA believes that the key to accurate and reliable instruction includes a lot of interaction between students and teachers. She thinks, however, that there are possible means to provide more interactions via the Web and that the Web can also accommodate a lot of the different learning styles if the instruction is well designed.

Although technical support staff and teaching assistants generally approve of WBE, they have concerns nonetheless. One respondent thinks that WBE will definitely remove the interaction found in the traditional classroom. There is a concern that in a Web-based course, instructors have no control over their students' behavior, and possible cheating. Another respondent thinks that the effectiveness of WBE depends on the type of material delivered and the motivation of the student, suggesting that WBE will need more focus and attention from both teachers and learners than traditional education demands. One respondent believes that the biggest concern is that the dean and the faculty members really have to make a commitment to WBE and be supportive. It is a significant commitment of the students' time and money to be at a certain place to study, so the need for WBE has always been there. Now there are a lot of tools and facilities to better meet the students needs. If we cannot respond to meet the needs, students will go elsewhere. So there has to be an overall commitment from both the administration and the faculty. The administration must provide the staff support and faculty must provide the creative effort. The difficult part with the faculty is getting them to realize how much work it will be and that they must come up with something beside overhead lectures and think of other ways to teach. In terms of graduate level education, one TA believes it might be more difficult to deliver on the Web because, in her case, she feels she needs some kind of guidance. However, she thinks WBE is possible for students who can manage their learning well. Also, we received one reply from a remote student, who is also a teaching assistant, who thinks interactions between students and instructors are very important. She does not like the current feeling of being at a distance and thinks that WBE will further alienate remote students.

Teaching assistants are more concerned about technology and course development. One respondent hopes that everyone can accurately understand WBE and give enough attention to it. Also, the content of Web-based courses is crucial and should never be overshadowed by technology. Instructors should have clear objectives and present all material clearly. One respondent thinks that if we take the information and just put it on the Web in text, we are basically doing the same thing as having the professor just spit out the information. The design of the course is very important. Another respondent worries that there would be a shortage of people who are highly trained in instructional technology. There are also concerns that networks are still vulnerable, and applications are not always as stable as they should be. A TA suggests that the technology requirements should not be too high for fear that only an elite group of students might have access to the information to which everyone should have access. Five of the nine survey respondents think that WBE requires as much or more time than that needed for a traditional classroom course. One TA says that it takes time to prepare the online material, time when the course is offered, time for the instructor to make preparations for the class, time for monitoring and responding to electronic discussions, and time to repair bugs in the technology. One teaching assistant thinks WBE requires time roughly equal to that of a traditional class, and another respondent thinks the time will be greatly increased.

In terms of compensation, the respondents think that the work that has been done for Web-based courses should be recognized and compensated, for both the development time and the teaching time. Instructors and technical staff should also be compensated for the delivery of course content and travel expenses. It is

also recommended that a new position should be created for extra work. One respondent thinks that many of the skills of the technical support staff have great value outside of the realm of education, so the school should be willing to spend the money in order to attract and retain quality staff for the WBE program.

3.3 FACULTY

3.3.1 FACULTY ROLE

In the new environment of on-line learning, the role of the faculty is changing from being the “sage on the stage” to the “guide on the side”. Faculty members are becoming facilitators of the learning experience rather than the controller of the experience. With WBE “faculty need to balance roles as they retain their role of content expert and facilitate deeper learning by explaining, clarifying, directing and helping learners construct their own knowledge.” (Truman-Davis, B., & Hartman J., 1998 p.5) This new role will be successful only if faculty members are willing to risk and experiment with the new technologies and methods of delivery and teaching. The unwillingness to take on a new role in a new teaching environment is often based on anxiety and fear. Williams (as cited in Truman and Davis, 1998 p.3) says that there is often a “fear of change, the fear of time involved, the fear of appearing incompetent, fear of technobabble, fear of failure, not knowing where to start, fear of making bad choices, fear of typing and the fear of reprisals and rejection.” This fear and reluctance can certainly be detrimental to the WBE program. When institutions of higher education begin offering instruction online, faculty who are reluctant to use computer-mediated communication technologies often fail to engage actively with distant learners. Students who do not meet face-to-face in classrooms rely on instructional faculty to provide individual feedback and to facilitate interactions among members of the learning group. No instructional design is hardy enough to withstand the detrimental effects of content-expert faculty members who cannot, or will not, communicate effectively with their geographically dispersed students.

As faculty take on this new role and new method of teaching, they also must develop necessary skills. Schlosser and Anderson (as cited in Sherry, 1996) identify the new skills as:

- “identifying learner characteristics at distant sites;
- understanding the nature and philosophy of distance education;
- creating teaching strategies to deliver instruction at a distance;
- organizing instructional resources in a format suitable for independent study;
- training and practice in the use of telecommunications systems;
- becoming involved in organization, collaborative planning, and decision-making;
- evaluating student achievement, attitudes, and perceptions at distant sites; and
- dealing with copyright issues.”

Faculty members play a crucial part in the development of an online course. Faculty need to be a part of the development team. The faculty will engage in the whole process of Web-based course development, which “will enable the instructor to create a Web-based learning environment...based on his ideas and his way of teaching.” (Collis, B., 1998 p. 120)

3.3.2 FACULTY DEVELOPMENT

Faculty Support Principles are included in the Principles of Good Practice for Academic Degree and Certificate Programs and Credit Courses Offered Electronically. These principles state that “the institution assures appropriate training for faculty who teach via the use of technology, the program or course provides faculty support services specifically related to teaching via an electronic system, [and] the institution provides adequate equipment, software, and communications access to faculty to support interaction with students, institutions and other faculty.” (Texas Higher Education Coordinating Board) Participation in a

WBE program requires a strong commitment to the training and support of faculty. Faculty development and training should be focused not only on the technical tools and skills necessary for WBE but also on the development of pedagogical techniques and skills. WBE development training provides faculty with the opportunity to examine and improve their curricula and teaching skills.

3.3.2.1 TRAINING MODEL

Faculty and course development workshops provide training in the technological, pedagogical, and operational aspects of Web-based education. The training model used by the University of Central Florida recommends that faculty development workshops include: “understanding the philosophy of distance learning, dealing with copyright issues, adapting teaching strategies, designing interactive courseware, identifying learner characteristics, organizing instructional resources for independent study, using telecommunications systems, collaborative planning and decision making, and evaluating student achievement and perspectives.” (Sorg, S., Truman-Davis, B., Dziuban, C., Hartman, J., & Juge, F., 1998 p.5)

Attending systematic or mandatory training advocated by the institution or school allows for colleagues to share their knowledge and experiences; training allows faculty to discuss the process of teaching and learning in a Web-based environment as well as a chance to evaluate and share their WBE successes and failures. Through training courses faculty members with little knowledge of or experience with WBE are exposed to tools and processes by actively working with and learning through the WBE technologies used in the actual courses. Apprehensive or inexperienced faculty members also gain a great deal through presentations and discussions led by faculty who are experienced in or who have experimented with WBE. Sorg et al. (1998) report that the University of Central Florida encourages the development of faculty cohorts in order to facilitate the transformation of the teaching and learning process through collaborative, experiential learning and the modeling of principles applied in WBE such as learning communities. These online learning communities and collaborations extend beyond the boundaries of traditional colleagues from one specific department to encompass a community of scholars from a variety of disciplines, as well as Web developers and researchers (Truman-Davis & Hartman, 1998)

While collaboration and communication among colleagues should definitely be fostered in a WBE program, there must be some guard against simply repeating the status quo in a new environment. This “group think” occurs when members of the collaborative group fail to think beyond traditional processes. In her article, *Individual anxiety and institutional decision making*, Cravener (1999) says that the “signs of group think include failing to consider a sufficiently wide range of goals and objectives, failing to consider a sufficiently wide range of methods or strategies for goal attainment, failure to seek out relevant information, selective bias in processing information, and inadequate feedback or evaluation mechanisms for both process and product.” There must be someone with authority and experience in WBE to guide the program while seriously considering faculty suggestions instead of having faculty members with little experienced with WBE actually making WBE-program decisions.

3.3.2.2 TRAINING RESOURCES

A school may choose to conduct faculty training in-house or may opt for campus-wide training initiatives, depending on the available resources. The GSLIS is equipped with an extensive Information Technology (IT) lab that can provide faculty with some of the technological tools and staff to support the learning of these technical skills. GSLIS Faculty members should take full advantage of the IT lab’s short courses and online training in order to further develop their technical skills. However, the use of the IT lab and staff does weigh on the School’s resources. An alternative is to use the faculty support resources provided by UT-Austin. Some of these resources, such as ACITS, CIT and CTE, are covered in section 3.3.4. The CIT and CTE have the resources to train faculty in both technical and pedagogical WBE skills. Also, the Instructional Designer on staff could train faculty members, as this person would have the required knowledge base. Having the Instructional Designer train allows for a broad scope of training possibilities, such as one-on-one or specific group training depending on the situation and the faculty circumstances.

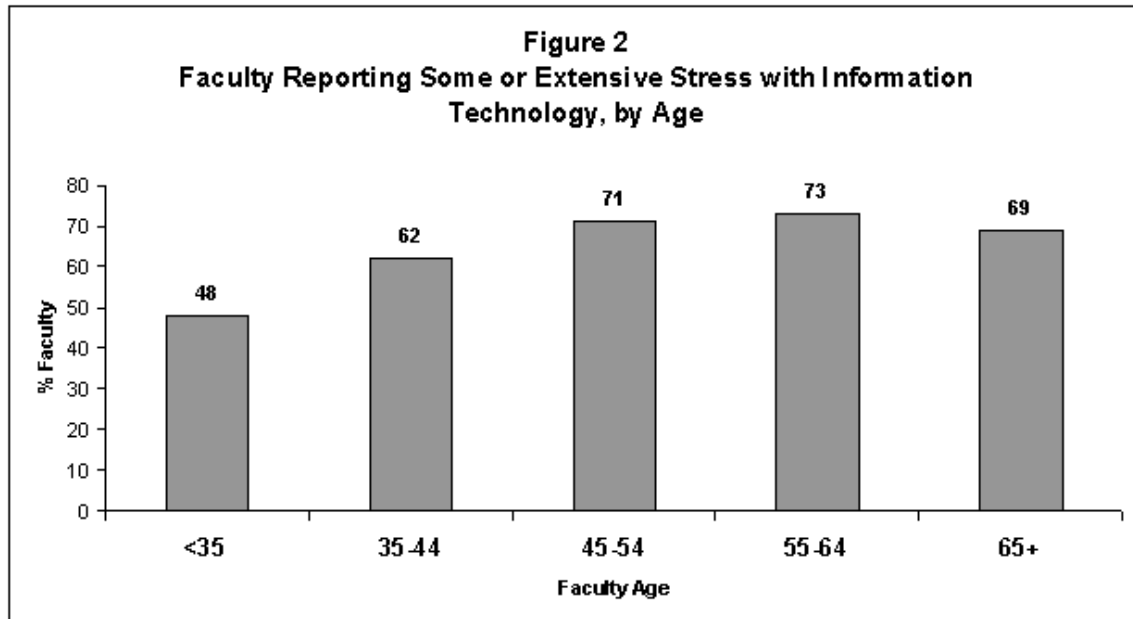
The development and design of a WBE course gives faculty members the opportunity to focus on and examine their course content and their teaching methods and skills. The resulting discoveries should lead the faculty to improve and refine these skills both in WBE courses and in their traditional courses. Currently at GSLIS the student evaluations of professors and their course are the only means of identifying problems with courses or teaching skills. The novelty of WBE makes evaluations and feedback, not just by students but also by peers, imperative in the development and improvement of these types of courses. Peers can provide faculty with the constructive criticism needed when embarking on a new endeavor. Peer evaluation will ensure that the WBE program is meeting the standards and objectives of the School.

3.3.2.3 TRAINING BARRIERS

Lee and Johnson (as cited in Cravener, 1998) say that the technical support staff members spend much of their time trying to help the faculty learn the most effective media for communicating with their WBE students. Unfortunately, it is reported that most faculty members do not attend technology-training programs or do not implement the new educational technologies they have learned. According to Cravener (1999), faculty are usually not interested in learning new technologies to support teaching and learning; instead, faculty tend to concentrate more on issues that affect them personally such as tenure needs. Since most faculty members have a lot of experience with, and many feel success in, teaching and researching, they often see no reason to improve their performance in these areas. Cravener (1999) feels that “subject-expert faculty has minimal incentive to alter their current practices—and add to their workloads—by learning new high-tech skills” due to the fact that “few colleges reward the use of technology or distance teaching with tenure or promotion awards.”

For many faculty members, learning to use new technologies to support distance teaching and learning is a time-consuming undertaking for which no immediate gain is apparent. This can produce stress in participating faculty. Results of a survey of 33,785 faculty members from 378 two- and four-year institutions conducted by UCLA’s Higher Education Research Institute (HERI) indicate that information technology is a major source of stress for faculty. The survey reported that within the past two years the attempt to ‘keep up with technology’ is a significant source of stress for two-thirds (67%) of faculty members (HERI, 1999). The level of this stress results from a combination of factors such as the amount of time put into information technology and the age of the faculty member (see Table 3.1). Since academic faculty represent the largest investment made by the university, it seems reasonable to plan faculty development programs that maximize faculty effectiveness by adapting to the workload, as well as to the psychological and social needs of faculty.

Table 3.1



(HERI, 1999)

3.3.3 FACULTY COMPENSATION AND INCENTIVES

Faculty participation in WBE is most often based on intrinsic reasons, such as reaching a wider audience, working with new technologies, and experimenting with new teaching methods. For many, professional satisfaction is the greatest reward and serves as motivator more than does monetary compensation (Wolcott, 1998). "Offering a course through an alternative medium such as the Internet can be very rewarding. Translating a course for alternative delivery can provide an excellent avenue for professional development...great satisfaction is derived from building a successful Internet course and knowing that diverse student needs have been met." (Powers, 1997) In the past, participation in distance education has most often been voluntary. However, because of new technologies and the Web, more institutions of higher education are participating and expanding their distance-education programs. With this expansion, faculty participation in the program is a necessary expectation.

However, the fact is that in most disciplines there is a real difficulty in gaining professional recognition for Web publications that are not subsequently published in more traditional media. Web pages themselves are not commonly peer-reviewed, and are of little value for promotion or as a serious forum for academic work in their fields. That has important consequences – particularly for WBE schemes heavily dependent on the Web for content delivery. Until faculty view the Web as a viable medium, one cannot expect that they will make much use of it. It is hardly surprising that faculty who are interested in maintaining and increasing academic quality in teaching and research in their disciplines see the Web in this way. Before they can be expected to take Web authorship more seriously, it will have to be shown that there are things one can do by using the Web that cannot be done, or cannot be done well, in traditional media such as print and in class discussions and lectures.

3.3.3.1 MONETARY COMPENSATION

In order for faculty to participate on a satisfactory level, the compensation practices of the institution must be examined. Wolcott (1998, p.4) states that “compensation should be equitable in relation to the amount of time and effort invested, and equivalent with more traditional forms of teaching.” In fact, inequities in compensation can be a disincentive and can hamper program recruitment and retention of faculty. Often though, participation in the development and delivery of a WBE course is required in addition to a normal workload. In this instance a supplemental stipend should be considered. However, faculty who have received stipends for extra courses frequently report that the amount does not adequately compensate for the time invested (Wolcott, 1998).

Of the other North American LIS schools that responded to our survey only one reported giving faculty extra monetary compensation and that was an additional stipend when teaching a WBE course during the summer session. Other than that, three replied that their institution gives faculty release time from one course when developing and/or when teaching a WBE course. The three other schools did not have any kind of unique compensatory practice for WBE.

Table 3.2 shows the results of a survey of distance-learning compensation practices. The survey was conducted in a multi-campus community college district in west central and southwest Nebraska and included a sampling of community colleges from other states as well as one four-year university. While the participating schools with one exception were community colleges, the results can inform schools at the University level with regards to their distance-learning or WBE compensation policies.

Table 3.2

Institution	Development compensation	Teaching Compensation	Ongoing Compensation
Elgin Comm. College	\$100.00 for each 8 hours of formal training they attend. Also, 3 hours of release time for developing an online course.	\$200.00 per class	Additional pay stops after two semesters.
Western Iowa Tech	None	\$350.00 per class. One time payment.	No
Johnson Comm. College, KS	Release time from 1 course	None	No
Northern Wyoming Comm. College District	None	None	No
Eastern Iowa Comm. College	Title III Grant is providing for training costs to train instructors how to develop a course.	\$50.00 per credit hour. One time payment	No
Central Wyoming Comm. College	Part of a four-state consortium. Federal funding: Basic course development - \$500.00 to \$1500.00	Part of regular load.	No
Crowder College, MO	None	None	No
Ozark Technical Comm. College, MO	None	None	No
Central Comm. College, Grand Island, NE	Two hour release time the semester before they teach the class	In special cases may pay overload; one hour of release time the semester of teaching the class	No
Metropolitan Comm. College, Omaha, NE	\$300.00 to \$500.00	None	No
Northeast Comm. College, Norfolk, NE	Training required prior to teaching: institution pays \$200.00 to \$500.00 of training costs.	None	No
Southeastern Comm. College, Lincoln, NE	First time preparation of course – 3 hours of overload pay.	1 hour of release time for a 3-credit-hour course they are teaching.	No
Western Nebraska Comm. College Area, Scottsbluff, NE	First time development fee of \$125.00 per credit hour	None	No

Southern Illinois University	None	\$500.00 per course	Yes
Albuquerque Technical/Vocational Comm. College	None	None	No
Northwestern Michigan Comm. College	None	First-release time or stipend	No
Florida Comm. College	None	None	No
El Paso County Comm. College	None	None	No
Seward County College	None	None	No
Mid-Plains Community College Area, North Platte, NE	One-time payment of \$300.00 per credit hour for course development	\$200.00 for each full or partial increment of three off-campus students	Yes

(Ford, C.M., 1998)

3.3.3.2 OTHER INCENTIVES

An institution may not have the resources to compensate faculty adequately for the extra effort and time put into WBE. Since money is not the only professional means of compensation, other incentives can and should be utilized to ensure program success and faculty satisfaction. Simple gestures such as “certificates of appreciation, public praise or acknowledgement... and peer recognition” (Wolcott, 1998 p.6) can be used successfully to motivate faculty. There are also incentives that serve the dual role of motivating faculty as well as strengthening the program. These incentives include (1) the help of a teaching assistant and other program staff members, (2) adequate faculty training and development in Web-based distance education technologies and applications, (3) release time to develop courses, and (4) being outfitted with the latest computer technologies. There are certainly many other creative alternatives to monetary compensation. In fact, Wolcott (1998 p.5) reports that at one institution “a roving parking permit was a significant perk.” No matter the type of compensation or incentive used, it is important that some kind of reward system be put into place so that faculty feel their participation in WBE is worthwhile.

3.3.3.3 PROMOTION & TENURE

The values and role expectations of an institution are reflected in the reward system of that institution (Wolcott, 1997, 1998). The promotion and tenure processes dominate the reward system in higher education. In a 1997 study of Carnegie Category I Universities, Wolcott found that faculty perceived research as their institution’s top priority, valued and rewarded over teaching and service. This creates a conflict of faculty resources between scholarly research and participation in WBE. This conflict is extremely important to resolve, as it is a major factor in faculty participation in Web-based distance education.

Faculty members are most often rewarded only at the departmental or college level for their contributions to distance education. Administrators at this level recognize and reward faculty efforts in accordance with the department or college's particular priorities. If WBE is a priority it will be encouraged and promoted with rewards. In turn the department's or college's efforts and involvement in WBE are brought to the attention of, and may possibly be rewarded at, the university level (Wolcott, 1997).

The credit for WBE may fall into any of the three categories typically considered in the tenure and promotion process: teaching, service, and research.

A teaching credit is considered when the Web-based course contributes to the teaching record or is considered innovative instruction. There are opposing schools of thought, however, on the amount of credit Web-based courses should receive. One is that Web-based courses should be weighted more heavily due to the amount of time involved, and the other says that they should be equal to a traditional course. There is definite agreement that Web-based courses should not count any less than traditional courses (Wolcott, 1997).

A service credit is considered since WBE reaches a wide and diverse audience who may not be reached by traditional methods of outreach. Also, WBE showcases a school's technological innovations and distance education activities on a global scale. However, the service category is usually the least consequential in the promotion process. Therefore, it is important that administrators evaluate their school's priorities and the effects of a WBE program on those priorities. Considering those priorities a school may wish to modify its definition of service and the part that service plays in the promotion process. (Wolcott, 1997).

A research credit is rarely considered, as there is no apparent advantage to WBE. (Wolcott, 1997). In fact participation in WBE could be considered detrimental in that the increase in time needed to participate in a Web-based course detracts from the time available for research. The University of Central Florida's proposed solution to this problem is to make data collection part of the course development model (Truman-Davis & Hartman, 1998). This would make WBE not just a vehicle for teaching but a vehicle for research as well.

The issue of tenure is an important one to consider. It is a very crucial part of the promotion process in academia. A survey done by the Higher Education Research Institute suggests that faculty support for tenure is rising (see table 3.3.3.3.1). Since 1995 there has been an increase in the number of faculty who agree that "tenure is essential to attract the best minds to academe." (HERI, 1999) The characteristics of distance education and WBE and the manner in which they are viewed and judged in the tenure process do not easily promote faculty participation in these types of programs.

Table 3.3

Tenure Attitudes Among Faculty, by Rank and Year

	Percent disagreeing strongly or somewhat that "tenure is an outmoded concept"			Percent agreeing strongly or somewhat that "tenure is essential to attract the best minds to academe"		
	1995	1998	Change 95-98	1995	1998	Change 95-98
	All Faculty	62	67	+5	54	61
Tenured Faculty						
Full Professors	73	78	+5	68	76	+8
Associate Professors	71	77	+6	63	71	+8
Assistant Professors	64	72	+8	51	61	+10
Untenured Faculty						
Full Professors	38	45	+7	35	41	+6
Associate Professors	43	51	+8	37	43	+6
Assistant Professors	53	62	+9	47	56	+9

(HERI, 1999)

3.3.4 TIME CONSIDERATIONS

The engagement of faculty in WBE course development is time-consuming. Faculty must not only have the time to develop the online course but also have sufficient time to examine their pedagogical goals (Truman-Davis & Hartman, 1998). Having the faculty member work with a team of staff members to develop a course online gives the instructor the opportunity to think of extended ways of teaching instead of the details of the course delivery (Abernathy, 1998). The University of Central Florida estimates that the re-engineering of an average course using their team-based process takes one semester (Truman-Davis & Hartman, 1998). Gabany (1997) feels that initially it is easier to develop a course online rather than to

convert existing courses since that would eliminate a mind-set about content and the hours of searching for material, links, and images to accompany that content.

Additionally, following the introduction of a new WBE course, a great deal of time is spent modifying the initial design based on feedback from students who bring to light problems and questions not anticipated during design. Harapnuik, Montgomery, and Torgerson (1998) logged 1400 hours for design, first-time delivery, and modification of a Web course introduced at the University of Alberta in 1996 (see table 3.4). However, hours logged in preparation for subsequent delivery of the same course were substantially fewer, leading the authors to conclude that the first-time delivery of a course via the Web should be considered “development time”, as distinguished from “operation and delivery time” required for maintaining a course offered repeatedly. These distinctions are important factors for decision-makers to consider when calculating the costs of WBE. If instructors are not allotted the time necessary for development, implementation, and support of Web courses, the quality of education may suffer and professors will be subject to burnout (Harapnuik et al., 1998). Garson (1996) believes that the time faculty spend mentoring students online is often decreased because there is the desire to capture back in some way the amount of time put into developing the course. He says that “this problem is not intrinsic to online education, but it is endemic.”

Table 3.4
Times for Course Development and Pilot Testing

Task	Hours
Development of course outline and identification of course resources (May – July, 1995)	200
Original Web page design and major revision of course resources (August – December, 1995)	400
Course revision during face to face delivery (January – April, 1996)	60
Course revision prior to first asynchronous delivery (April – May, 1996)	30
Course revision and delivery during first asynchronous delivery (June – September, 1996)	750
Total	1440

(Harapnuik, et al., 1998)

One simple way to increase time and decrease stress is to spread the preparation and development of a course over a longer time period. Often faculty try to develop a Web-based course in the same amount of time they would a normal course. Two GSLIS professors who have developed Web-based courses say they did so in approximately one semester, on top of their normal workload. They were admittedly pressed for time. In order to alleviate this pressure Gilbert (1999) suggests a great deal of pre-planning and a development time frame of at least 12 months. This allows the professor to learn new material, take advantage of training opportunities, and practice Web-based education skills before implementing the course. Gilbert goes on to recommend that a timetable be established for ordering texts and making sure course resources are available to the students.

The University of Maryland University College’s Graduate School of Management and Technology has looked into the amount of time it takes to teach an online course. The preliminary findings indicate that although Web classes are generally smaller in size than traditional classes, faculty who taught via the Web spent 2-5 hours more per week in their classes than faculty who taught in person (SchWeber, Kelley & Orr, 1998). Unfortunately, this study used self-reported data from faculty respondents, and the number of respondents was too small for statistical conclusions at this point in their research. However, the patterns that have emerged from the research indicate important considerations of the faculty time involved in online courses. The data collected from the study are presented in Table 3.5.

Table 3.5:

	Median - Online	Median - In Person
Class size	23	30
Grading Exams	2.5-3 hours	0.5-1 hour
Individual Contact between Student & Teacher	3-2 hours each semester	0.5 hour each semester
Obtaining additional resources for students	1.5 hours	1 hour
Course development	50-40 hours	18-17 hours

3.3.5 SURVEY OF GSLIS FACULTY

A survey was sent out to all GSLIS faculty members, including adjuncts, in order to determine their attitudes and needs concerning a GSLIS WBE Program. All questions were open-ended to allow for as much input as possible from the faculty. The questions probed the faculty members' general opinions of WBE, their training needs, their knowledge of WBE technology, the kind of staff assistance they may need, how WBE participants should be compensated, and any other pertinent issues or concerns that they had. Included in this survey were three questions from the Instructional Design Group regarding the appropriateness of courses for WBE. The survey was sent to the 36 faculty members listed on the online GSLIS faculty directory posted on the GSLIS Website at <http://www.gslis.utexas.edu/cgi-bin/people/faculty.cgi>. Surveys were sent via email as well as through put them in faculty mailboxes. Eleven out of those 36 faculty members responded to the survey (see Appendix B for the survey questions and responses).

3.3.5.1 RESULTS

Opinion of WBE

The majority of respondents are cautiously optimistic about WBE. Most respondents feel that the WBE is a promising educational tool. However, most also admit that there are problems with WBE that need to be resolved and standards that need to be met before WBE can be truly successful. Two of the faculty members feel that the Web is better suited to supplement traditional courses or other distance education delivery modes than to replace them. One faculty member does not feel prepared to give an opinion on the effectiveness of WBE due to the complexity of the issue and her lack of knowledge of studies and research in the area.

Training

There is a definite lack of organized training among the faculty for WBE specifically and distance education generally. Only one of the respondents took a training course in distance education. That professor attended a conference where she learned to teach via television. Three professors who have taught distance education courses at GSLIS using interactive TV had no prior training in teaching from a distance. One instructor is completely self taught in the technical skills such as Java and HTML. Two faculty members who have actually developed Web-based courses had no special training; nevertheless, both felt comfortable with the technology involved.

Many professors do not have much experience with or feel comfortable with the technologies used in WBE. Those professors feel that they will primarily need staff assistance in order to participate effectively in such a program. Those professors who indicated that they are comfortable with the technology but are not very experienced with it said that they would need training and practice with more moderate level technologies. For example, one professor feels that training is needed for skills such as monitoring a list-serve or using a Webcam. Those professors who indicated a high level of technical knowledge feel they need training with advanced skills such as video production, teleconferencing tools, and graphics design.

Staff Assistance

Staff assistance is essential to faculty members designing Web-based courses. Most of the faculty members who responded to the survey have never actually taught a Web-based course. Therefore, it was necessary for them to guess as to the kind of staff assistance they will need. A teaching assistant (TA) is

the primary staff member mentioned by most of the respondents. However there are variances in what is expected: a 10-20 hour TA, one 20 hour TA per 25 students, or two 20 hour TAs. Also, it is expected by some of the faculty that a TA in a WBE course be technically proficient with WBE technologies in order to assist the faculty member with the Web course maintenance and troubleshooting. Besides teaching assistants, professors recognize that they will need the help of the Instructional Technology staff as well. Instructors who have participated in WBE or are comfortable with the technology said that they will need more advanced help from staff such as graphics designers and video producers. One professor says she feels she will need the services of a copyright council.

Compensation

The responses to the question on compensation are quite varied. Two respondents say that an increase in monetary compensation commensurate to their efforts is required to induce faculty participation. Three others responding positively for compensation feel that some release time or some kind of decrease in teaching load will be sufficient for the faculty developing and teaching WBE courses. Other instructors who answered the question of compensation feel that WBE is simply course delivery by an alternate media and participants should not receive extra compensation. A few responded that they have no idea how WBE professors should be compensated for their efforts.

Other Issues

The last question asked faculty what other WBE issues concerned them. The following is a list of the responses:

- Copyright;
- Security;
- Job protection;
- Off-campus equipment access for faculty and students;
- Cost and funding resources;
- Statistical verification of WBE;
- Cost-effectiveness;
- Quality of instruction;
- Evaluation of students; and
- Comparison of teaching systems.

3.3.5.2 ANALYSIS

It should be noted that a majority of the GSLIS faculty did not respond to our survey. This could have been a result of various factors. Some proposed reasons are that the faculty did not have the time to respond, felt they did not have adequate knowledge of the subject, or simply were not interested. This lack of response, and the factors behind it, must be taken into account when developing a WBE program at the GSLIS.

The results of our survey indicate that WBE is a technology most faculty members regard positively. However, this generally positive view is balanced by the stance that WBE is an emerging technology that must prove itself in the educational arena. By the responses of the faculty, it has yet to do so.

One of the main reasons faculty are apprehensive about WBE is the fact that very few have actual experience working with it - either as a teacher, student, or staff member. However, there are some faculty members who do have the experience of teaching via two-way television, which is the GSLIS traditional distance-education medium. Also, the few professors who have experience with WBE are in a small minority. GSLIS offers no standardized or organized training of faculty for traditional classroom teaching, traditional distance education, or WBE. Training is something faculty members have to pursue on their own.

The technical and computer skills of faculty vary widely. The basic technical skill level is the ability to communicate via e-mail and operate a Web browser along with other basic computer skills needed for traditional courses such as wordprocessing and simple presentation creation and design. Those faculty members with advanced computing skills are knowledgeable in areas such as programming, HTML,

multimedia and advanced software packages but feel that there are additional high-level skills they would like to acquire.

The faculty require staff assistance in a WBE program. It is difficult for faculty members with no experience in WBE to estimate the kind of assistance they will need; however, it is obvious to most that the support of a 20-hour TA with ample technical skills is a necessity. Also, the help of the IT lab staff or other technical staff members devoted to WBE is foreseen by some, although not the majority, of the faculty. Technical assistance is an obvious necessity; however, help with instructional design and pedagogical support is equally important yet not often cited as a need by those who are comfortable teaching via traditional course media. The faculty need to be made aware of the staff resources that are available for their use.

The other concerns of the faculty are generally based on a lack of understanding of and inexperience with WBE. Also, the current lack of WBE information and policies coming from the administration does nothing to alleviate the concerns. Faculty concerns are valid and important to consider and resolve. As WBE develops the resolutions to these issues should become more apparent. With communication among WBE experts, GSLIS administration, and faculty these concerns should diminish considerably.

3.3.6 INTERVIEW OF GSLIS FACULTY

Over the course of the last several weeks, we have conducted personal interviews with faculty members as a follow-up to the survey we distributed to them earlier. We decided to interview both full-time faculty and part-time faculty/adjuncts. Our decision was based on the rationale that if GSLIS moves forward with implementing WBE in a broad program, part-time and adjunct faculty members are as likely to be involved as full-time faculty. Moreover, as you will read below, certain aspects of WBE may be more suited to undergraduate courses, which are often taught by adjuncts, and some adjunct faculty already have experience with certain forms of WBE.

We have not been able to interview the entire faculty although we made every attempt to reach as many as we could within this short time frame. This in itself demonstrates an interesting aspect and potential problem with designing a full WBE program. Faculty schedules are very tight, and any new programs will encounter this problem almost from the outset. That being said, we believe we have gathered enough information to attempt a general summary of the thoughts, attitudes, and ideas that GSLIS faculty have toward WBE. We will not be personalizing this summary but instead will be citing the range of opinions given on the various subjects below.

What has been your experience with WBE?

The overwhelming majority of the interviewed faculty members do not have direct experience in WBE as defined by our study and the school at this point. One instructor created a completely online module for a class. Two others have some indirect experience. Many faculty members, however, have experience with interactive video education and distance education in general. Ideas of WBE have been formed partly on this experience, partly on what has been learned from colleagues who are engaged in WBE at other universities, and partly on readings from academic publications and the popular press.

What are your feelings about a WBE program for GSLIS?

One particular aspect of this question was faculty members' opinions on why WBE is being pursued as a high-priority goal by the GSLIS. The unanimous opinion is that the main reasons are largely political. Among the reasons mentioned are:

- to reach an under-served population, for example, full-time workers, people at a geographical distance, people in remote or rural areas, and so on;
- to uphold the reputation of the School as one on the cutting edge of technology used in education;
- probable financial benefits for the School, as they believe that ultimately, WBE may be more cost-effective than traditional education; and

- other schools are already underway with WBE, and UT should not be perceived as being “behind” the technology curve.

Overall, faculty members had a hard time finding a compelling academic reason for aggressive pursuit of WBE. One reason mentioned was the desire to try the technology simply because it exists and is highly interesting and has potential. Some felt that WBE might or might not yield academic benefits. Most felt we should go ahead and try in order to see how it works. The overall mood toward WBE was positive.

Although several faculty members strongly opposed significant and speedy reallocation of resources to WBE and, especially, the idea of having a whole degree program online, most were willing to try WBE and experiment with it. One of the specific positive aspects mentioned was the ability to broaden the knowledge exchange in the areas of the GSLIS that are not always at the forefront, such as preservation and conservation. For example there are only 3 preservation chemists in the US, so a broader field for these professionals to reach others and inform and educate them would be a very positive aspect of WBE.

Several people specifically mentioned the danger of going aggressively into a new area because of mainly political reasons, as political imperatives change. They felt that UT should wait and not try to be among the first to embrace WBE in a large way, in order to ascertain long-term support for such initiatives. They also discussed the need to carefully balance the needs of physically present students and online students, and to allocate resources in a fair manner.

What should be done to encourage faculty participation?

A broad range of opinion exists on this question. Several felt that no special steps should be taken to encourage faculty members. The rationale was that this was a normal part of evolving academic and school life. Given the usual provisions for the success of the program, nothing specific should be done. Some felt that WBE should be encouraged in a somewhat negative manner, for example, through peer pressure rather than incentive. However, the largest percentage of interviewees felt that there was indeed a need for specific incentives. One incentive mentioned frequently was a need for release time: a reduction of academic workload while a faculty member designed a WBE course. This was a direct result of the perception of WBE design of courses as time-consuming. Several interviewees mentioned a financial incentive as well. However, for the most part, financial compensation was viewed as a good idea for those faculty members who did an exceptionally thorough and fast job designing and implementing a Web-based course or courses. A small number expressed the opinion that there should be direct administrative mandate for faculty members to adopt the new technologies and build online courses within a reasonable timeframe. Most interviewees felt that such administrative imperatives might pose a danger to academic freedom, however, and felt a looser approach would be more effective.

What additional information about WBE do you feel you would need to participate? In what areas do you feel you would need training in order to participate in WBE?

A singular concern expressed by practically everyone interviewed over the broad implementation of WBE was the need for more in-depth research on the subject. Although practically every interviewee had read something about WBE, and was familiar with the general concepts involved, the faculty felt there was a dearth of scientific, quantifiable, and especially long-term outcome research on WBE. Specifically, some faculty mentioned that before implementing WBE, they would like to see studies presenting outcomes of such education for students. Questions they wanted answered were: what sort of people took the courses, how much did they pay, how long did it take to complete the course or program, what sort of jobs did the students get, how the WBE degree was perceived by employers, how effective did the students feel WBE was, and so on. A comparison of academic achievement between traditionally educated and online education students was deemed essential by some. Many faculty members expressed optimism that this class’s project would help in this respect.

As far as specific training was concerned, most said that even if the bulk of the technical work was done by technical support staff, they would like to get additional training in technical aspects of WBE: HTML, basic programming, and the use of interactive tools were cited. Several mentioned they would like an update on the educational design and teaching techniques associated with WBE. For the most part, though,

the faculty did not feel that specific personal training for themselves was a major issue in their potential participation in the program.

How would your teaching style work in WBE? How would it not? How would course structure change?

The most important aspect, which was mentioned repeatedly in connection with this question, was the role of interaction in education. All the faculty members interviewed were unanimous in their opinion that interaction was a vital part of education, and particularly so in graduate education. They felt that this might prove one of the most difficult aspects to compensate for or approximate in a Web-based learning environment. From this point on, the specific suggestions and ideas diverged. There were a few who put a great deal of faith in developing interactive technologies, such as streaming audio or interactive online video. All mentioned the importance of active email communication and utilization of such interactive tools as chat rooms. Some, however, maintained strongly that physical, real-time, face-to-face interaction was a vital component of most graduate courses. The logical suggestion was that the student be required to attend campus at the beginning of the semester, and either/or the middle or end of the semester for one or two days each time. Of course, this raises the issue of geographic accessibility and cost, at least for some underserved populations. Overall, the faculty did not feel that they would have or want to change their teaching style significantly in a Web-based course; rather, they were talking about adapting their style to the online environment, and they were looking for possible tools and techniques that would help them to do this. Everyone mentioned that transferring lectures to the online environment would be a big change: the written word is perceived in a different cognitive mode than speech. They also expressed curiosity and concern as to how this new mode would affect student learning. However, most agreed that their course would have to undergo structural change to go online. Those who had a lot of team assignment or a workshop-style approach would need to rethink the syllabus and grading criteria. Specific suggestions were not available because most faculty members are not yet involved in actual online-course design.

What staffing needs do feel you would have in a WBE program?

The model that emerged from the interviews was that of a professor who is building an online course, having a dedicated technical support staff, that is, a person to code in HTML, programming, audio streaming, and so on. Opinions differed on the status of such a person. Some faculty felt a full-time professional would be necessary. Others thought that graduate students could be utilized, specifically those on the Information Science track. Some felt that student interns would be inadequate because of the fast pace of the graduate program; in other words, interns would have barely attained mastery over the necessary tasks by the time they graduated, and new interns would need to be trained. Some faculty felt that to have a specific person versed in instructional design and teaching techniques peculiar to the online environment would be helpful. Others thought this would be superfluous and felt confident they could handle this aspect on their own. Few considered the number of teaching assistants needed to make the change. At least one faculty member mentioned that if she were going to have an online course, she would like to be given some time and opportunity to master the essential technical aspects such as HTML coding herself.

Do you have the time to participate in WBE? If not, how do you see this problem being resolved?

This was a thorny issue because none felt they had any spare time to do this. A wide range of opinion existed concerning probable time demands in an online environment. A few faculty members felt that there would be no significant change. Most felt, though, that WBE would be more time-consuming than traditional instruction, specifically because of the high volume of email communication necessary. There was some agreement that during the building of a course, faculty should have release time. All agreed that once a course was in place, they would adapt and do what was required. A few people mentioned that if WBE became more time-consuming than traditional teaching, permanent release time would be necessary; others strongly objected to this idea, as they felt resources would be taken from those students actually present on campus.

What do you feel you need from the administration of GSLIS or from UT to make you comfortable with WBE?

Most of the faculty felt uncertain answering this question. A significant percentage felt that some sort of centralized administrative unit in charge of WBE would be helpful. There was a specific proposal that this unit would be organized and centered on Dr. Mary Lynn Rice Lively, who is currently doing the bulk of work in this area.

How would you address the issue of students' pre-existing knowledge? (Meaning the lack of knowledge the student might have which would hold up their progressing in the course. Ex.: a term that the student does not understand would be able to be answered quickly & easily in the traditional environment, but what would happen in the web environment?)

As with all the other questions, this one generated a wide range of opinions. Some faculty pointed out that the dichotomy of the situation described above as played out in the traditional classroom and the Web environment is spurious. Not all students ask questions about what they do not understand in class right away: they don't want to look foolish, they are hesitant, etc. Besides, in many traditional classes that use the Web and email as educational tools, a large percentage of such inquiries are happening online, either in direct email communication between a student and a professor, or on class discussion boards. These two media already exist and would be available, obviously, in an online course. In fact, posting questions to a class board can encourage active communication among class members. However, some professors said that the absence of physical interaction would seriously hamper their ability to address gaps in students' knowledge, either prior knowledge, or a lack of understanding that occurs during a lecture or presentation. They specifically described how they could see in a student's eyes or body language that they are not getting a point across, and that this important communication cannot take place online. A lesser concern expressed by some was that with 100% of the class communication being expressed in writing, the coursework would be far more time-consuming for both students and instructors. (The positive side of this coin is that writing skills might be developed to a higher degree.)

How would you address the emotional issues of your students in an online class?

There is a wide variety of teaching styles, and consequently the amount of personal and emotional interaction that occurs between and among professors and students varies in type and degree. The subject matter and degree of rigor of a course also influence its emotional impact on students. Some professors mentioned that classes leaning more heavily toward information science, which require previous technical preparation or mathematics, can take a great emotional toll on students who might lack such necessary preparation, but even worse, who lack the belief in their ability to catch up and succeed in the course. Therefore, a constant and tactful encouragement is required to help these students succeed and achieve their educational goals. The concern was expressed that this sort of coaching and emotional interaction cannot be duplicated online. On the other hand, some professors mentioned that sporadic emotional interaction can conceivably take place through email. In fact, the enhanced degree of anonymity may make it easier for some students to express themselves honestly in seeking help or advice from a professor, TA, or AI.

One issue that came up in conjunction with this question, one that we ourselves did not think of originally, was the moral component of education. Several professors insisted that subtle emotional, moral, and ethical communication is a natural part of the traditional classroom environment. These professors tend to believe that such communication is a valuable part of education and cannot be duplicated in an electronic environment.

How do you see WBE changing the balance between academic (analytical, problem solving) & professional (career skills, etc.) education?

Many professors expressed skepticism that WBE in itself, even if implemented on a large scale, would have the power to alter significantly the balance between the academic and professional components of higher education. Some noted, though, that a turn towards professionalism has been afoot for some time, and WBE would be a logical development in this direction. Most faculty members said that a great deal

would depend on what kind of students would partake of WBE; in fact, they are waiting for the results of the current report to get some information on this issue. A couple of theories were put forward. It was stated, for example, that WBE would probably be most beneficial for those people who have been working in libraries as paraprofessionals, and need a degree to move forward in their careers. The negative side of this would be that such students would have limited opportunities to explore various avenues and possibilities in library and information science. As traditional students, they would potentially be exposed to, and able to make choices from, a much wider variety of possible tracks and experiences.

What are your thoughts on the issue of copyright and intellectual property? How do you think these issues can be resolved?

This question turned out to be too large and complex to generate brief and concrete responses. Legal expertise in this area would of course be necessary, and a body of legal precedents is still developing in courtrooms around the country, and even internationally. As far as the copyright of materials by other authors used in WBE instructional modules goes, several professors mentioned that they would go through the same process they go through now in obtaining permission for fair use of materials in traditional classes. Web sites containing such materials (if they were put on the Web, as opposed to other methods of dissemination) would have to be password-protected. As far as intellectual property on the Web-based course developed by a professor and his team goes, most faculty members expressed general satisfaction with the current situation at UT. The question of who is to own the course, the professor or the University, did not seem to bother our interviewees much, although some mentioned that they could foresee this becoming a big issue in the future.

Conclusion:

Based on these interviews, as far as recommendations go, there are two ways to proceed from here in engaging faculty in the development of WBE at the GSLIS. One could be dubbed the "laissez-faire" path, the other the "administrative mandate" path. Concerning the former, the University could ask for volunteers among the faculty to build Web-based courses and provide encouragement and support along the way, in the hope that the success of the "pioneers" would generate sufficient peer pressure and excitement among the rest of the faculty, who would in time follow suit. This would take longer than the latter path. This latter path would place specific and standardized expectations on faculty, and would become one of the criteria for faculty promotion, and so on. Such factors, along with encouragement and incentives, would develop WBE in a structured manner in a particular time frame. The danger of this path is that it would possibly impinge on academic freedom of the faculty, with fractionalization being the unfortunate result. Both paths have advantages and disadvantages, and which path is decided upon will have to be determined by the faculty and administrators at UT.

3.4 RECOMMENDATIONS

The overwhelming majority of educational players feel that WBE is a promising educational medium, and many schools are pushing to implement such a program. Simply implementing a program is relatively easy; however, developing and implementing a successful WBE program is quite a challenging task. Such a program requires a strong commitment to quality by all parties involved - administration, faculty, staff, and students. As one faculty member who responded to our survey bluntly points out, "[Web-based Education] offerings are much like Web pages and other Web-based applications and systems. Some are fantastic and some really suck" (Appendix 3.B). Great effort must be made by the GSLIS to build a fantastic WBE Program.

3.4.1 STAFF

3.4.1.1 ADMINISTRATION

The administration must first develop a mission statement and goals for WBE. This process should include faculty and staff input so that all participants feel an ownership of the program. This process should be deliberate and not rushed, so that participants become accustomed to the idea of this new medium and the technologies of the medium. Begin with simple goals such as a Web presence for all courses and a baseline standard for faculty technical and computer skills. From this point faculty participation in WBE can be promoted and encouraged, eventually establishing a specific expectation for faculty involvement in WBE. The following is a list of recommendations and considerations the administration should take into account when launching a WBE program.

- **Establish specific goals, policies, standards and objectives for a WBE program and its role in fulfilling the School's overall objectives.**

There must be clear guidelines as to what is expected from the program and those participating in the program. It is important that it be understood how these expectations contribute to the goals of the School.

- **Articulate the WBE mission to faculty, staff and students.**

A mission provides faculty, staff and students with a common goal to work towards. Participants must understand how their role in WBE affects the outcome of the program and the objectives of the School.

- **Determine a single point of contact responsible for coordinating the School's WBE program.**

One person coordinating the WBE program minimizes the opportunity for miscommunication and misdirection. Also, participants – faculty, staff and students - know whom to go to when they encounter problems.

- **Designate administrative staff responsibilities for WBE that include:**

- **Registration and enrollment**
- **Student advising**
- **Tuition and financial aid coordination**

While new staff positions in these areas do not have to be created for WBE the current administrative staff must be able to deal with an increase in workload, the computing technologies used to communicate with remote students, and any needs unique to WBE students.

- **Market and promote the WBE program**

It is possible for a WBE program to be a self-supporting and even a revenue-generating enterprise with the proper marketing strategy.

- **Promote GSLIS faculty collaboration within the GSLIS as well as with faculty in other disciplines.**

The collaborative aspects of WBE expand the possibilities of education and make interdisciplinary education more viable. Also, those departments and schools already participating in WBE can mentor the GSLIS and its faculty.

- **Provide faculty training and development programs and resources for WBE technical skills as well as for pedagogical methods.**

Development programs must be strongly encouraged by the administration; otherwise faculty will most likely not take advantage of the programs. A variety of resources must be made available for faculty

taking into account the varying skill and experience levels, learning styles, time demands, and other work related obligations.

- **Maintain computing and telecommunication resources for faculty and students.**

A WBE program cannot exist without an excellent technical infrastructure. The administration must be committed to maintaining and upgrading the infrastructure.

- **Continuously monitor the effectiveness of WBE and constantly work to improve on all aspects of the program (i.e. technologies, pedagogical methods, student learning and satisfaction).**

While it is under development and even after it has been established, a WBE program must continually be evaluated to determine whether or not the program is achieving its goals and fulfilling the School's objectives.

3.4.1.2 TECHNICAL STAFF

- **Develop a staff team for WBE that includes at least the following:**

Instructional designer
Programmer/Technician
Graphics Designer/Video Producer

This is the core staff team that is needed for a WBE program. One person may have multiple responsibilities yet care should be taken that this staff member is not overloaded. This team should be available to all of the participants of a program.

- **Provide technically savvy 20-hour TAs to assist participating faculty**

Due to the amount of teaching and development time required for a WBE course a participating faculty member will definitely need the assistance of at least one 20-hour TA. Depending on the available resources and the number of students in a WBE course, the number of TAs allotted to a faculty member should increase.

- **Utilize University staff resources:**

- ACITS
- CIT
- CTE

These resources provide an abundance of qualified staff to help with technical assistance, developmental support, training programs, and many other specialized services of use to WBE program participants.

- **Employ the students of GSLIS, as well as students from other disciplines in student staff positions.**

Student employees from the GSLIS, as well as other disciplines such as Education have a lot to offer a WBE program. It is a symbiotic relationship, as the WBE program will need inexpensive yet skilled staff and students need part-time work that gives them practical experience.

- **Pay a competitive salary for WBE professional staff**

In the commercial marketplace IT jobs command a high salary. If the GSLIS is considering hiring a professional staff members, it must be willing to pay a competitive salary. Otherwise it may not be able to attract or retain high-quality employees.

3.4.2 FACULTY

3.4.2.1 FACULTY ROLE

Collaboration and communication are essential to the success of WBE within GSLIS. Those faculty members who are willing to experiment with WBE must share their knowledge and experiences with faculty members who are more resistant to the new media. Also, research done in this area must be made available, so that those faculty members who are not especially interested in teaching via WBE will still be informed as to the advances in the technology and its emerging role in education.

- **In the initial stages at least, faculty should not be forced to participate in the WBE program. Instead, experimentation and contributions should be encouraged and supported by the administration.**

Faculty who feel forced into participating in WBE will not produce a high-quality product, and ultimately the students will suffer thus adversely affecting the reputation of the WBE program.

- **All efforts need to be made to encourage faculty participation by seriously considering and resolving the factors that keep the faculty from participating.**

The specific factors can be determined in faculty discussions promoted by the administration. In general, however, these factors relate to anxiety caused by technology and a new pedagogy, lack of time and resources, a feeling that WBE will be detrimental to advancement, and a general lack of understanding about WBE.

- **A solid support system, clearly stated policies and expectations, and adequate compensation and training must be in place before the administration can successfully mandate faculty participation.**

While the administration can mandate participation at any time, the program will be successful only if there is support for the faculty, plus clear policies and guidelines that will guide them and hopefully make the faculty more open to participation.

- **Discoveries made by those faculty members experimenting with WBE need to be shared with non-participating faculty members.**

The sharing of knowledge will help to educate those who are not able to experiment with or who are reluctant to participate in WBE. The positive outcome of this communication will be that more faculty members are encouraged and inspired to be involved in the WBE program. Also, underlying peer pressure or competition may actually be a motivating force for non-participating faculty members when confronted with the research and innovations of their colleagues.

- **Faculty round-table discussions about WBE issues will facilitate the sharing of information and the feeling of collegiality among faculty members.**

Communication among faculty members who are participating in the WBE program is also essential. Each can learn from the successes and mistakes of the others. Issues can be resolved and anxieties can be allayed when there is a forum to voice concerns.

- **Faculty should be involved in and contribute to WBE discussion as team members but should not be responsible for guiding the WBE program.**

In WBE faculty must see themselves as part of a team and not the lone authority. Faculty contribution and guidance is essential to the program. However, most faculty members are not experienced with WBE and therefore are not qualified to make important decisions about the program.

3.4.2.2 FACULTY DEVELOPMENT

There must be some kind of minimum amount of training offered to faculty members. Since there are very few with actual experience in WBE, the primary goal is to develop an understanding of this new technology. The best way to do this is to provide the faculty an opportunity for hands-on experience with WBE in the role of student. This approach will not only increase their understanding of WBE but also allow them to begin thinking about how to modify their curriculum and teaching method so that they will be effective over the Web. Teaching in a WBE environment requires faculty to think beyond the boundaries of traditional teaching and learning. Required training will introduce them to techniques and technologies they may not have previously been aware of. Also, this type of training is also a forum where faculty members can have some of their WBE concerns and questions resolved. Training of this kind should take place periodically to update the faculty on new technologies, methods, and research in WBE.

The wide variety of technical skill amongst faculty seems to present a challenge in offering training. A solution is to require faculty to have a minimum computer competency level. Faculty computing skills should at least be equal to but preferably greater than the skill level required for student participation in a WBE program. There must be some kind of mandated training or evaluation implemented by GSLIS to ensure that faculty skill is at the required level. Staff assistance should be made available to faculty for WBE skills required beyond the minimum level. However, training should be available to faculty members who express a desire to advance their technical skills and knowledge beyond the minimum requirement. This can be accomplished by encouraging faculty participation in the short courses offered by the GSLIS IT lab staff. Also, specific training sessions can be arranged through the IT lab staff or the UT ACITS. There are numerous resources by which faculty can be trained. The administration should support training and lifelong learning among the faculty by making the existence of these resources known and encouraging their use.

- **Specify basic computer skill requirements at least equal to those expected of participating WBE students**

A faculty member must at the very least be able to utilize the technologies employed by the Web-based course simply to be able to participate actively in the course and communicate with the students.

- **Provide technical training for faculty members of all skill levels, from providing the basic requirements to teaching advanced skills.**

The faculty technical skill level at GSLIS is so varied that one technical training class will not be able to meet the needs of all faculty. Faculty have to be encouraged to update their knowledge and skills.

- **Encourage faculty attendance in short courses conducted by the GSLIS IT lab.**

The GSLIS IT lab has the resources to train faculty in specific technical areas. The faculty simply need to take advantage of these courses.

- **Offer guidance for faculty development of new pedagogical methods and curriculum evaluation.**

The change in pedagogy that occurs with WBE may be difficult for the faculty. However, faculty can be eased into this change with proper direction from instructional design staff. This process of change requires the faculty to examine and improve their course curricula and teaching methods.

- **Faculty members must have an understanding of WBE and its effect on education.**

The faculty cannot be expected to be fully engaged in a program or pedagogy they do not completely comprehend. Incorrect assumptions about WBE need to be replaced by educated awareness.

- **Require faculty members to participate as students in a WBE course for training purposes.**

One of the best and simplest ways to have faculty experience WBE is by having them actually take a WBE course. They will gain the student perspective while at the same time learn about WBE. Hands-on experience allow faculty members to see what works and what does not work when educating over the Web.

- **Promote the utilization of faculty development and training resources available campus wide at UT.**

UT development and training resources and services are available and are abundant. Faculty should definitely be encouraged to use the CIT and CTE resources.

- **Make faculty development and training a high priority for WBE as well as for traditional courses.**

With the push to develop faculty for the new WBE environment, their skills as teachers in traditional courses cannot be forgotten and must continue to be developed and refined as well. The principle of lifelong learning should apply to teachers as well as students.

- **Make peer evaluation a part of the assessment process for WBE courses as well as traditional courses.**

Currently, GSLIS uses only student evaluations in assessing courses. However, the novelty of WBE and the inexperience of faculty with WBE require that the effectiveness of the courses be monitored and that program standards be met. However, if peer evaluation is implemented for WBE courses then there is no reason that peer evaluation should not be implemented for traditional courses as well. All courses should meet the standards and objectives of the School, and peer evaluation can help to achieve this.

- **A well rounded faculty training and development program will cover:**

- understanding the philosophy of distance learning;
- dealing with copyright issues;
- adapting teaching strategies;
- designing interactive courseware;
- identifying learner characteristics;
- organizing instructional resources for independent study;
- using telecommunications systems;
- collaborative planning and decision making; and
- evaluating student achievement and perspectives.

(Schlosser and Anderson, as cited in Sherry, 1996)

Faculty must be aware of all the aspects of WBE from the technical and pedagogical issues to legal and organizational issues. If faculty are trained only in the technological aspects of WBE, then they will not have the skills to be a productive member of the WBE team.

3.4.2.3 FACULTY COMPENSATION

It is difficult to make a specific recommendation as to what adequate faculty compensation should be for a GSLIS WBE program. Compensation for WBE is a debated topic and one that has a variety of resolutions. Compensation depends upon the resources and policies of the school. However, the compensation and the reward practices for WBE are a definite reflection of the priority of WBE in an institution. Therefore, the

GSLIS must implement some type of reward system and compensatory policies for WBE participation that takes into account faculty concerns and requests. The following are recommendations for developing compensation and reward policies:

- **“Institutions should work to:**
 1. **Identify and provide a wider range of incentives that can lead to greater satisfaction and job performance among faculty involved in classroom innovations and outreach activities.**
 2. **Reduce barriers, both real and perceived, that may hinder participation in activities that promote the values and goals of both the institution and the academic unit.**
 3. **Create faculty development programs that provide incentives and rewards, which appeal to intrinsic motives, accommodate different career paths, and match developmental stages of motivation**
 4. **Provide instructional support programs that provide:**
 - **Training in the use and integration of new technologies and approaches to instruction**
 - **Mentoring of faculty new to distance education and teaching with technology**
 - **Technical support in using new and emerging information technologies**
 - **Assistance in the design of instruction and in the development and production of instructional materials**
 5. **Develop criteria to equitably determine flexible workloads and adequate compensation for outreach teaching and alternative modes of instructional delivery**
 6. **Align rewards with institutional values and priorities so that rewards reflect role expectations, and faculty contributions to all facets of the institution’s mission are valued and appropriately credited**
 7. **Establish copyright policies that accommodate changing patterns in information access and dissemination, and that protect both institutional interests and the intellectual property of faculty.”** (Wolcott, 1998, p.7)

3.4.2.4 OTHER FACULTY CONCERNS

- The amount of time required for WBE participation and the general feeling of a lack of time is a major faculty concern. Some resolutions are to:
 - **Include in the faculty training program time-management skills with emphasis on situations encountered in WBE.**
 - **Provide adequate and accessible staff assistance.**
 - **Encourage development of WBE courses at least 12 months in advance.**
 - **Give faculty release time when developing and for at least the first time teaching a WBE course.**
- Copyright issues and course ownership were areas that GSLIS faculty feel uncomfortable with because many do not have a clear understanding of current policies, especially as they relate to WBE.
 - **Administration must articulate the copyright and course ownership policies to faculty**
 - **Include these topics in faculty development training**
 - **See section 1.63 for more information on copyright issues.**
- The quality of education provided by WBE concerns faculty. Many do not have a clear understanding about the pedagogical methods and implications of WBE.
 - **Provide faculty with assistance from an instructional designer in order to broaden their concept of teaching over the Web.**
 - **Require participating faculty to be trained in the pedagogy of online education**
 - **See section 2 for more information and recommendations about pedagogy.**

3.6 CONCLUSION

The resolutions to issues facing the faculty and staff of a WBE program will become more evident as the technology develops and is more widely implemented and experimented with. What is evident is that

institutions of higher education cannot escape this technology. WBE will have to be dealt with at some point in the near future. In order for a program to be successful, it must be carefully and thoughtfully planned, administered and monitored. This includes making faculty feel comfortable with this new medium through clear administrative guidance, staff support, development programs, and participation incentives. A successful WBE program is possible when the human element is not neglected and the fundamental educational goals of the school are not forgotten.

SECTION 3 - APPENDIX A

SURVEY OF GSLIS STAFF

QUESTION 1:

WHAT IS YOUR OPINION OF WEB BASED EDUCATION (WBE)?

1. I believe it has great potential, but that it requires more focus and attention than traditional education for both teachers (course developers) and learners.
2. I think it can provide students access to educational opportunities that were previously unavailable. I don't see WBE as a replacement for traditional classroom instruction, but when face-to-face interaction is not possible, WBE can be an effective substitute. I think the effectiveness of WBE depends on the type of material and the motivation of the student.
3. I think it is a concept and technology still in its infancy.
4. When constructed using the very best of instructional and Web design, I think that WBE can both enhance learning options for students and move instructors from the "talking head" to more of a facilitator of learning. There is no one best model for WBE. Each course must be planned using the most appropriate technology (or not) for different instructional objectives.
5. Very important.
6. This sounds great if we can recruit more students.
7. It is a great opportunity for many prospective students.
8. I think it's a great idea.

QUESTION 2:

WHAT EXPERIENCE HAVE YOU HAD WITH WBE?

1. I have helped put together Dr. Hallmark's Introduction to Information Resources and Services class that's being offered at ITESM. I've also worked extensively with web-based technical tutorials, but these are not formally accredited coursework.
2. I have been a TA for Grete Pasch's online LIS 312 class for two semesters. During the first semester, the instructors were present while students viewed online materials and worked on Web-based assignments. During the second semester, the class has been entirely Web-based (the class only meets to take quizzes). I also provided technical assistance to Bob Travica's Information Technology and Organization of the 2000's. My role was limited to troubleshooting MS NetMeeting.
3. I have been following the LIS 312 class taught at GSLIS via the Web. I have also done some reading on the subject.
4. None as a student, only as a planner, producer, and facilitator of courses.
5. I have some experience with WBE although it is unrelated to GSLIS education. I designed some Web-based interactive quizzes for the American History classes I was teaching at Austin Community College. See: <http://www2.austin.cc.tx.us/~songhome/finalindex.htm>
6. None.
7. I do not have any experience with WBE, but I look forward to learning about it.

8. I have taken four web-based courses through ACC, and I really liked them. I was able to work at my own pace and could participate when I wanted to. It's a great option to have for someone who works full-time and does not want to attend class after a hard day in the office.

QUESTION 3:

WHAT ROLE DO YOU SEE FOR YOURSELF IN THE GSLIS WBE PROGRAM?

1. As a technically savvy person who can help facilitate web course development. I'll graduate before there would be any WBE classes for me to take. I might possibly take additional classes in the future, and WBE would be a strong possibility for me as a working parent.
2. My role has been to provide technical support. I have not been involved in producing content for WBE (that is the job of the professor/instructor). My job is to make sure that network resources are available to students. That involves installing appropriate software (with necessary patches), establishing connections between remote sites, troubleshooting individual systems (making sure RealPlayer doesn't crash, for example), hooking up microphones and video cameras, etc. For the 312 class, I am also responsible for responding to the emails, grading online assignments, and meeting with students when they have problems accessing the materials or understanding the material.
3. Possibly teaching LIS 312 via the Web next fall.
4. Currently, my role is to identify financial and human resources to encourage and support the development of WBE.
5. I am designing a Web-based tutorial for Dreamweaver.
6. Student information.
7. I can see myself dealing with questions from WBE students concerning financial aid and academic awards.
8. Depending on the course, I would like to participate as a student. I would be glad to offer other input but not sure at this time what that could be.

QUESTION 4:

HOW MUCH TIME AND EFFORT ON YOUR PART DO YOU PREDICT WOULD BE NECESSARY TO IMPLEMENT AND SUPPORT WBE?

1. Before the class is offered -- I once heard an estimate of 100 staff-hours, and that seems reasonable, given my experience.
2. While the class is offered -- I would estimate the rough equivalent of a traditional class (class time, preparation, and grading), though the time would be spent on different tasks, like monitoring & responding to electronic discussions.
3. From a technical perspective -- depends on what's being done. Dr. Hallmark's class primarily requires a Web server, but others might require more specialized applications.
4. I can't give you hours per week, but supporting a WBE class seems to greatly increase the instructor's workload (at least initially). It takes a lot of time to create online materials, there are always bugs in the technology, and (in my opinion) grading and administration takes longer. Basically, with an online class, you multiply the number of details that need to be taken care of.
5. As much or more as that needed for a face-to-face traditional classroom.

6. No, clue. Much more, however, that one might predict initially.
7. Hard to say.
8. None.
9. Assuming WBE students will be inquiring about financial aid and/or academic awards, the extra work responding to their questions will require another block of time, and even more time will be required if the students would be eligible for the aid/awards. Initially, 'approved' responses would need to be drafted, and the responses tailored to 'eligible' vs. 'not eligible' for the aid/awards. Then, assuming they would be eligible for aid/awards, the added work would be directly proportional to the number of individuals inquiring and applying for the same. At this time I am dealing with any and all questions on financial aid and academic awards from possible students, Joe Q. Public, and newly enrolled and continuing Austin, El Paso, and San Antonio students. As I have stated many times before (as well as have some faculty members), the financial aid/academic awards coordinator position, if done correctly, requires an entire 40 hours per workweek. If WBE-related work is added, it only furthers the issue of a separate position. So, taking into consideration the sundry other 'hats' I wear for GSLIS, at this moment I am so overwhelmed by the present workload on my desk that the thought of added work is almost incomprehensible.
10. Do not know.

QUESTION 5:
WHAT ARE YOUR CONCERNS ABOUT WBE?

1. That developers don't/won't recognize how unforgiving a medium Web-based education is. One can teach a traditional class without nailing down objectives, tying them tightly into a conceptual framework, clearly understanding & articulating the links between things studied, etc. It may not be as good a class, but students will succeed. Web-based students will not be able to.
2. That developers will become so enraptured by the technology that they will let that drive their course development instead of building up a solid conceptual and pedagogical base and putting the tech on top.
3. That the foolish prejudice of "Web-based ed[ucation] is easy!" will continue to mislead new students and blind employers as to the seriousness of this as an educational modality.
4. I guess cheating is always a concern. It seems that it would be very easy to cheat or be dishonest because students are not supervised. Really, you have no control over the student's behavior. I'm a little concerned about the technology. Networks are vulnerable to disruptions from accidents (natural and otherwise) and attacks. Applications (such as NetMeeting or RealPlayer) are never as stable as they should be. There's always a danger that your materials, quizzes, etc. simply won't run on a student's computer and there may not be anything you can do about it.
5. Primarily, that it removes the interaction possible in a classroom setting.
6. Developing "one-size-fits-all" courses and the loss of socialization of students into the profession.
7. There is a shortage of people who know techy stuff or instructional technology.
8. Admission, registration, advising.
9. Other than the information provided in the previous answer, I do not have any concerns.
10. Having taken four, I don't have any.

QUESTION 6:

WHAT DO YOU FEEL WOULD BE FAIR COMPENSATION FOR THE WORK YOU WOULD PUT INTO WBE?

1. Equivalent pay to traditional environments for work done. That is, during the development time a professor should be compensated as if s/he is teaching a class, and then during active teaching the professor should be compensated as if s/he is teaching a class.
2. For my job, I'm paid "market rate" for a university job. It's not market rate for a web developer, but then I'm a student first & foremost, not a web developer.
3. Better pay ☺
4. Equal to or greater than that given to a classroom instructor.
5. Royalties from delivery of course content; travel \$ for attendance at courses and conferences that improve understanding and techniques of WBE.
6. Professional recognition and promotion as well as financial rewards.
7. A raise.
8. If my assumptions regarding the increased workload are true, fair compensation would be to have a GSLIS position created which is directed solely to financial aid/academic awards coordinator. If such a position were created, I would be extremely interested in taking the position. I thoroughly enjoy my work related to those duties.
9. N/A

QUESTION 7:

HOW COMFORTABLE ARE YOU WITH THE TECHNOLOGY USED IN WBE?

1. Fine. I prefer push communications (email) over pull (WebCT) so that I have one less place to go to do stuff, but that's a personal taste issue, not a facility with the technology issue.
2. I'm fairly comfortable with the technology (NetMeeting, RealPlayer, Web pages, chat rooms), but I don't really trust that it is going to work. Granted, my experience is with free software, but I don't really believe high-priced solutions would be that much better. The 312 class uses a lot of RealVideo. We had a lot of problems figuring out what we could do with RealVideo and what would crash the computers. This semester, the RealVideo seems to be working fine, but other problems arise. For example, one of the University's lines to the Internet was recently cut. If we had a quiz where, for example, students had to use different search engines, they wouldn't have been able to access the necessary pages. The technology is fairly reliable, but you have to expect difficulties from time to time.
3. I don't know if that answers your question. I feel comfortable producing materials for any of the WBE technologies I've come across.
4. Very.
5. Very comfortable.
6. Comfortable but not very. There are a million things I don't know.

7. Can't answer.
8. My position does not require a 'comfort level' with the technology. I will be interested in learning about it as it relates to the administrative office.
9. (no answer)

QUESTION 8:

HOW MUCH DO YOU KNOW ABOUT CURRENT WBE SOFTWARE?

1. A lot about the publicly available stuff, not as much about the proprietary (Lotus LearningSpace etc.) software. Ummm, let me revise that. I'm a technologist by trade and preference. I could learn what I needed to know about LearningSpace in a couple of months. But I can't walk up to a LearningSpace interface and make it sing at this moment in time. That's what I mean by "not much."
2. Like I said above, I have a functional understanding of various WBE software. I don't really know exactly how it works at the guts level, but I'm pretty comfortable with most of the applications.
3. Somewhat familiar.
4. Only those products with which I've experimented (UOL, WebCT). I do, however, feel comfortable with HTML and a variety of Web editing programs.
5. For my Web-based tutorials I just use an HTML editor like Dreamweaver. There is some WBE software developed by the British. You can use them for creating interactive exercises, surveys, and questionnaires.
6. None.
7. I know nothing about it; but it will be interesting to learn some of it.
8. I am currently taking Web-design courses and will also take some programming courses through ACC so I am somewhat familiar with the software and would like to know more.

QUESTION 9:

DO YOU HAVE A FORUM TO VOICE CONCERNS? IF YES, DO YOU FEEL YOUR CONCERNS ARE ADDRESSED AND RESOLVED SATISFACTORILY? IF NOT, WHY DO YOU FEEL THIS IS SO AND WHAT WOULD YOU PROPOSE TO CHANGE THE SITUATION?

1. Voice concerns about what? I talk to my boss if I have work issues, and to the developer (or other dev support staff) if I have course development issues...???
2. Well, I feel like I can voice my concerns to the IT Lab staff and the instructors I work for. I feel that they respond very well to my concerns. However, I'm not involved in many high-level decisions.
3. Yes, I believe most GSLIS faculty and staff are interested in this subject and the potentials of it.
4. Yes.
5. Yes.
6. No forum.
7. (no answer)

8. I assume my 'forum' is Melba Claymon. To date, there have been no discussions, conversations, remarks, etc. in my presence regarding the WBE issue. Since we operate, for the most part, on a 'need to know' basis, I have assumed there was nothing anyone thought I should know about WBE.
9. Comments:----Maybe I should be proactive?
10. (no answer)
11. I'm sorry, but I'm not qualified to answer your questions. A TA at a distant site is really nothing more than a mail courier and point of contact for the professor, and Dr. Gracy's class was not Web-based. Therefore, I have no experience in Web-based distance-education classes.
12. As a student, I do have concerns about these classes. While I'm sure some courses would be suited to the Web, I wouldn't want to see distance education fully taken over by Web-based courses. We feel remote and barely a part of GSLIS as it is. Why isolate us even more? We need face-to-face contact, even if it is only through telecommunication-based courses, to grasp at whatever sense of belonging can be found.

SECTION 3 – APPENDIX B

SURVEY OF GSLIS FACULTY

QUESTION 1:

WHAT IS YOUR OPINION OF WEB-BASED DISTANCE EDUCATION (WBE)?

1. I love teaching distance education via 2-way video & 2-way audio. I believe the Web can supplement this mode of teaching.
2. I think it cannot substitute for face-to-face methods, but can supplement it as a stress-reducer for students and time saver for faculty after development, which is a time-consuming activity.
3. There are problems that need resolution but it has great promise.
4. Very promising approach, especially as multimedia capabilities develop.
5. Can be useful but needs to meet certain standards.
6. I think that WBE has great potential. But having a favorable opinion of WBE as a concept is different than having a favorable opinion of an implementation of the concept. I think that WBE offerings are much like Web pages and other Web-based applications and systems. Some are fantastic and some really suck.
7. No answer
8. I've only taught LIS 341 & LIS 312 – (at GSLIS), both can be Web-taught.
9. That is an extremely complex question. The short answer is that I have not seen any studies that compare the effectiveness of distance education with traditional education.
10. I feel positive about it -- at the same time, we may need to utilize teleconferencing (i.e., interactive TV) occasionally (as we do for Monterrey) to provide "face to face" experiences.
11. I am sure WBE will be a great tool for many applications, for reaching people who would otherwise not be able to access a particular curriculum, and for providing additional flexibility for all of us. Since the Web can incorporate many different media in many different modes and since it is a moving target, I think it is difficult to generalize about its suitability.

QUESTION 2:

WHICH OF THE COURSES THAT YOU ARE CURRENTLY TEACHING OR HAVE TAUGHT PREVIOUSLY DO YOU FEEL WOULD BE SUITABLE FOR ADAPTATION TO WBE? WHY?

1. In the past I have taught Admin via 2-way video and 2-way audio. Again, I believe it could supplement this type of teaching. I rely on group presentations in front of an audience a great deal, and WBE would not suffice for this.
2. The basic and advanced courses in materials organization could be supplemented with Web-based exercises, but there are too many levels at which students start and too many individual questions that should be responded to on the spot in real time for this approach to substitute for real life face-to-face group interactions.
3. LIS 382L.12, and other reference courses- their materials lend themselves to the WBE format.
4. Potentially all courses. I have taught, except for doctoral seminars, which require multiple interactions and rapidly developed critical thought. But even doctoral seminars are eventual candidates for WBE.

5. LIS 312 but not WBE only; undergraduates need and ask for personal meetings
6. I think that you could teach the Information and Network Security class I teach in a WBE environment. In fact, some organizations do just that. But I think for this class that you would have to construct a mechanism to bring the class interactivity to the WBE environment. I started the class with slides and "standard" lectures that would have been well suited to a Web-based medium. Very quickly I found that the lectures lacked the interactivity that the class needed to master the material and I switched gears. The teaching environment improved greatly and I think this is the kind of functionality that you have to be sure to capture in a WBE implementation.
7. Probably any of the courses that I now teach can be -- but I have profound doubts about the quality/involvement of such approaches -- I wait to see really effective examples.
8. (No answer)
9. I will investigate whether or not Protection and Care of Records Materials (392P.6) is appropriate for DE. This subject matter is not covered in many schools.
10. Management. Could be easily adapted (challenging to find good ways to promote group discussions with case studies, etc.)
11. I think the training components of Organization of Materials I could definitely be Web-based as soon as the primary tools that are now available in electronic form have a Web interface. The main problem might be in coaching students who are having difficulties. The education portion is more difficult without student-to-student and student-to-teacher interaction.

QUESTION 3:

WHICH OF THE COURSES THAT YOU ARE CURRENTLY TEACHING OR HAVE TAUGHT PREVIOUSLY DO YOU FEEL WOULD NOT BE SUITABLE FOR ADAPTATION TO WBE? WHY?

1. Developing Media Collections is a very hands on course using many forms of new technology. Additionally, the type of non-book media that is cataloged needs immediate feedback and participation.
2. The introduction to LIS (as taught up to this point) does not. It would deprive students of the "survey of faculty" which can only be truly effective when the human being observes the human being in live situations, seeing other human beings' responses to the situation—in other words, a dynamic real situation.
3. None
4. None. Web will eventually be high-tech and high touch.
5. See response to question 2.
6. See above and flip the script.
7. My inclination is to put the courses where a high degree of interaction is needed in the NOT suitable category. Small seminars like Concepts of IR and the current AI/Expert Systems.
8. (No answer)
9. None of the Conservation or Preservation lab classes are appropriate for DE because it is necessary to work directly with objects.

10. I have taught the INTRO course, and 2 doctoral seminars. All could be taught with the caveat in #1.
11. I don't have definite opinion that either of the two courses I have taught at UT could not be entirely Web-based; however, I think the group discussion in a seminar is more cumbersome on the Web than it is in the classroom. On the other hand, some people will talk more freely in that environment than they will talk face-to-face. I do feel that a very important part of professional education is the contact that students make with each other. A completely Web-based curriculum might hamper that – but, again, it depends on what technology is available and how it is used.

QUESTION 4:

IF YOU HAVE TAUGHT COURSES USING TELECOMMUNICATIONS TECHNOLOGY, OR MORE SPECIFICALLY WBE, PLEASE INDICATE WHAT SPECIAL TRAINING YOU RECEIVED TO TEACH A DISTANCE ED COURSE AND THE AMOUNT OF TIME YOU SPENT DESIGNING, DEVELOPING, AND DELIVERING THE COURSE. HOW COMFORTABLE ARE YOU WITH THIS TECHNOLOGY?

1. I took an education course in distance education. I also took a two-day workshop at a tech conference (AECT) that taught you how to teach using television. The workshop was wonderful. The way I design & develop any course is geared to student participation. Thus, I made few changes. Delivering the course is totally different, timing is everything. Materials have to be at both sites, etc. Also, students at both sites MUST get to know each other. We are a unified class. (Materials could not be sent over the Web.)
2. For the past several years I have supplemented in-class instruction with group emails. The training I received for this was spotty. I do not know, for example, how to monitor a “served” list, and do not recall seeing this information being offered as a lab course, although it may have been. It would be helpful. I think that many people think of this as low-tech, but it is important-tech in the sense of supplementing our classroom offerings.
3. I have no special training in WBE, but in designing and developing WBE, I have done 300-350 hours on courses being developed currently.
4. I need to learn WBE. Have had much experience with interactive televideo education.
5. Self-taught HTML, Java et. al.; very comfortable but time-consuming
6. (No answer)
7. For 2-way interactive video courses almost no training is provided. There is a need to spend time finding resources appropriate at remote locations.
8. No training. Time: ~350 hours developing LIS 312. Very comfortable with the tech.
9. (No answer)
10. I have taught only Management via Interactive TV. I had a training session with Dr. DeLayne Hudspeth and some coaching...
11. (No answer)

QUESTION 5:

IF YOU HAVE NOT TAUGHT A DISTANCE ED COURSE, WHAT TRAINING AND SKILLS DO YOU FEEL YOU WILL NEED TO TEACH A WEB-BASED CLASS? HOW COMFORTABLE ARE YOU WITH THIS TECHNOLOGY?

1. (No answer)
2. I don't know exactly. I guess first of all having access to some appropriate and very friendly software for that, and a series of not-too-much-at-once information/demo/practice sessions at a variety of times; many of the faculty (most?) are adjunct.
3. elementary computer skills
4. Have taught many DE courses.
5. Video production; uncomfortable at present
6. I would want training on tools for designing complex but easily managed and used Web-sites. Basic HTML isn't going to cut it if you expect to provide any value-add to your students. You will need tight, functional web sites that don't force the student to spend more time learning to navigate than they do learning the course material. WBE must be transparent to the student. We can not have a technical elitist mentality that only Web-savvy technically literate individuals can benefit from WBE. The student should be able to instantly and continuously access the functionality of the WBE course with only the most basic of skills (how to log on and how to use a mouse, for example). This will require skills and/or tools in site design, scripting, Web-enable applications, etc.

I would want basic user-interface design training. I would want training to the point of moderate proficiency in one or more interactivity tools, such as teleconferencing or team collaboration over the Web, both from the perspective of how to set it up in a site and how to use it in the course of my class.

Much of this technology I have not had hands-on experience with, but I am comfortable with learning it.

7. I will need to be far more comfortable with some type of WYSIWYG editor (DreamWeaver or Frontpage) and the needed file-management skills to organize modules, etc.
8. No answer.
9. I am not comfortable with the technology and will need guidance selecting the best methods and instruction in all of it.
10. I would need someone who could take my content and explore with me the best ways to present it via the Web (both technical and design skills)
11. That, again, is a moving target. I have no training in programmed or online instruction of any kind. I am extremely practiced with email and sending and receiving attachments. I am not skilled at creating Web pages, have never converted a document to Acrobat, don't have a lot of experience with scanners, and don't use most plug-ins, Webcams, etc. I have never run a Listserv. I feel that doing a professional job on a Web-based course would take a great deal of expertise in all of these areas, although the course should probably be kept as simple as possible in terms of the technologies used.

QUESTION 6:

WHAT KIND OF STAFF ASSISTANCE WOULD YOU NEED TO PREPARE AND TEACH A WBE COURSE?

1. I think a TA (20 hours) is a must when teaching any distance ed course. Because I am an adjunct, I usually get 10 hours.

2. Don't know what it takes. Adjuncts are normally not given any assistance at all; that would have to be changed—not only for the benefit of the faculty member but for the benefit of students, who are the intended beneficiaries of expanded methods.
3. 2 TAs, with technical assistance from IT staff over 5-6 months.
4. Would probably need to be coached and mentored by both technical persons and fellow instructors.
5. Video producer
6. I would want at least one technically proficient grad assistant for my exclusive use. This individual would have the skills to help maintain and troubleshoot my WBE course. I would also need access to lab resources and design resources although these would not need to be exclusive to me.
7. One semester to prepare (free of all other teaching). One Grad. Assistant fluent in Web-publishing skills, probably lab staff with streaming-video skills.
8. To prepare: graphics designer, video/computer experts, a Web assistant (for doing scripts, HTML), perhaps a music [?-hard to read] person and a copyright counsel

To teach: a 20-hour TA per 25 students
9. At this point I cannot say.
10. A highly knowledgeable TA 10-20 hours a week. More like 20 I would imagine.
11. See above.

QUESTION 7:

WHAT COMPENSATIONS WOULD YOU CONSIDER FAIR FOR WBE PROFESSORS? HOW WOULD THE WORKLOADS OF WBE PROFESSORS AND NON-WBE PROFESSORS BE EQUALIZED?

1. At the workshop (AECT) I attended, we were told whenever you teach a distance ed course, you should only be teaching that course.
2. I don't know how much longer it takes to do this, but if it is more than about 25% I think the benefits to the students and school should be carefully re-examined. Again, adjunct faculty are otherwise employed and do not have the luxury of deciding to spend that kind of time on this kind of endeavor. Perhaps a cadre of student assistants could be available on a shared basis to work with adjunct faculty on developing web-based versions of courses. A lot higher monetary compensation would be required to induce most to substitute this activity for another that they already are involved in.
3. WBE professors are simply teaching courses by a different medium; equalization is not an issue.
4. WEB developers should receive incremental salary increases that are commensurate with their efforts. Also given relief time.
5. Teach fewer classes because preparation is time-consuming.
6. I don't have a good idea of this. I get the sense from the question that WBE professors would be paid less than that of non-WBE professors, based on lower workloads. I personally don't think there would be much of a difference in workloads, and I know that corporate training program designers working with WBE environments can make a lot more money than your average college

professor, so I think you need to be very careful on how to decide on compensation. It goes back to my first point - you don't have to pay a lot for a WBE course that completely sucks. You want one that works, and you probably need to be willing to shell out the coin for top talent.

7. I have no idea!
8. No idea
9. I cannot answer such a broad question.
10. I think all faculty should learn to do this. Therefore, I don't think "extra" compensation is warranted. A WBE course should carry the same weight (workload) as a "regular" course.
11. I think this question is very different for adjuncts. The assumption seems to be that a WBE course would require more instructor time, and I'm certain that it would require a great deal to it set-up, at least. Adjuncts are only partially compensated now for the time that they give to teaching. Most have no more time that they CAN give, both as absolute limit on how many hours there are in a week and also in terms in what they may be willing to donate for the good of the profession or the pleasure of teaching. It is also not altogether certain that adjuncts would find the same motivation for WBE that they find for classroom teaching or that it would appeal to the same set of people. In short, I think that how adjuncts would be used in a WBE environment would require considerable thought.

QUESTION 8:

WHAT TYPE OF TRAINING OR TECHNICAL EXPERIENCE DO YOU THINK THE STUDENTS SHOULD HAVE IN ORDER TO BE ALLOWED TO TAKE A WBE COURSE?

1. I believe GSLIS already requires computer literacy for entry into our program. I do not find any students in my class that cannot access Websites.
2. They should not have to have much at all—no more than they have to have to use other Web-based functionality.
3. No special training--very elementary
4. Standard, basic computer and Internet skills.
5. Comfortable with Internet applications
6. Like I said above, if you have a WBE course that requires the user to be a geek then you have a poorly designed WBE course. A browser is NOT hard to use. A WBE course should be no harder than the browser. If you try to popularize WBE by only "allowing" students with "training or technical experience" to take advantage of it, then you have and will fail - even if it works. In my humble opinion.
7. There are some existing pre-screening approaches to assess skill levels, etc. but skills/training would depend heavily on what Web course tool is used or supported.
8. A self-assessment test at minimum (e.g., are they social learners? If so, they will have to work harder on their own.) plus basics of chat, email, searching, browsers, etc.
9. Certainly they need enough to be able to handle the technology involved. In addition there are always course prerequisites.
10. All of the standard processes that we intend to provide in the new "boot camp".

11. Students would, of course, have to be completely comfortable with Web browsers and wordprocessors – but one assumes they would be. Chat rooms, listservs, etc. would also be needed, and some students may not have used them. Plug-ins could be a big issue. Students don't necessarily have the computing capacity or the knowledge to do complicated setups, particularly involving video conferencing or other technologies requiring broadband communications. Students would have to have access to LAN, cable, or other broadband connection in addition to a good machine.

QUESTION 9:

WHAT ASPECT OF WBE DO YOU FEEL WE HAVEN'T TOUCHED ON IN THIS SURVEY THAT SHOULD HAVE BEEN ADDRESSED?

1. (No answer)
2. Copyright issues. Security issues. Job protection. Equipment/software access from off-campus for faculty and students. (Maybe not survey-appropriate, but issues that could prevent serious implementation of this activity.)
3. Cost, perhaps, and resources for funding development.
4. Statistical verification of WBE. Cost-effectiveness relative to that of traditional instruction.
5. Different learning styles; quality & efficiency of WBE vs. classroom interaction
6. I don't feel like you missed anything, but I am not convinced that you have taken into account all the elements of a successful WBE program. I see WBE all the time in my corporate job. It is NOT hard to build one. And most of them are lacking for anything more robust than informational purposes. There is a big difference between putting the latest sales briefing on the Web over streaming video, complementing it with slides and graphs, and having a Web-based whiteboard for basic collaboration; and creating a truly interactive, reliable, real-time classroom style environment over the net. If all we are going to do is move a traditional snail-mail correspondence course to the Internet, then e-mail will suffice and we don't need to waste our time with WBE.
7. Insufficient space provided for any really thoughtful responses to be forthcoming, I fear! Obviously survey design is not a strong emphasis for LIS 387.5.
8. The fact that all courses will have a "foundations" part that won't change; this can be developed once and used over & over – and there is a constantly evolving part of the course work which needs frequent updates!!
9. Evaluation of what students learn, a comparison of teaching systems.
10. Nothing really, but it concerns me that from the wording of this survey, i.e. #7 "WBE Professors," that the faculty will see this as a special talent and WBE professors as the elite, entitled to more rewards and compensations.

SECTION 3 - APPENDIX C

SURVEY OF LIBRARY AND INFORMATION SCIENCE SCHOOLS IN NORTH AMERICA

RESPONDENTS:

1. The Catholic University of America, Washington D.C.
2. Louisiana State University
3. San Jose State University
4. University of Wisconsin at Milwaukee
5. University of Pittsburgh
6. University of North Carolina - Greensboro
7. Simmons College, Massachusetts

QUESTION 1:

WHAT ARE SOME OF THE MAJOR FACULTY AND STAFF CONCERNS AND PROBLEMS YOU ENCOUNTER WITH REGARDS TO YOUR WEB-BASED EDUCATION (WBE) PROGRAM? HOW HAVE THESE CONCERNS AND PROBLEMS BEEN RESOLVED?

1. We are just beginning to develop web-based courses. The major problem from a faculty perspective is the enormous time to develop a course. We have resolved this with granting of release time.
2. The availability of library resources at student locations. They have not been solved. We are using fewer books and relying more on textbooks and course packets. Books are not accessible.
3. Students worry when they do not have much communication with a REAL person. This is a concern/problem that will not be readily resolved. It will take time for students to go from a 45-hour course with a teacher present to something far less than 45 hours.
4. First, we do offer a number of courses leading to the MLIS via the web. This is a logical continuation--making use of newer technology--of the School's long-time commitment to offering our for-credit courses via various Distance Ed. mechanisms around [our state] and surrounding states. When the [GSLIS] began investigating the possibility of using the web for offering DE courses, a School committee was formed to identify key issues and concerns, and to assess the various software configurations available. Key issues for faculty identified by that committee included: 1) intellectual property rights/ownership; 2) workload implications; 3) technical support, and 4) general pedagogical/quality concerns. Nos. 1) and 4) above will probably continue to be discussion items/concerns for some time, with this new technology. Our University System has initially posited a stance that most courses thus developed are jointly protected for both faculty and the institution. The resolutions for items 2) and 3) are addressed below.
5. Course development is a very lengthy process and faculty does not have the time to commit to WBE in addition to their other teaching and research responsibilities. This has been an ongoing problem.
6. [No answer given.]

QUESTION 2:

(1) WHAT STAFFING HELP DOES YOUR FACULTY HAVE FOR THE DEVELOPMENT, DESIGN, AND OPERATION OF WBE COURSES? (2) WHAT ARE THE VARIOUS STAFF ROLES AND POSITIONS ASSOCIATED WITH THE WBE PROGRAM? (E.G.: PROFESSOR, WEBMASTER,

INSTRUCTIONAL DESIGN TECHNICIAN)? (3) ARE THESE POSITIONS STAFFED BY STUDENTS OR FULL-TIME EMPLOYEES?

1. Support comes from the central academic computing division of the university.
2. We have one full time technician and a student webmaster. The University provides some training. However, our efforts in switching courses to WBE are primarily faculty-driven.
3. (1)We have...a curriculum design expert on staff. The University also provides help if you go to them. (2)We have two professors who are most active in this role. We have a technology expert on our South campus who serves as the School's Webmaster. Other help is given by student assistants who scan materials, do Web-site input, etc. (3) both.
4. A full-time Distance Ed. Coordinator, who has an MLIS, lots of knowledge/experience in Web-based distance ed., and expertise in instructional design using new technologies. This person works with faculty to configure, mount, and operate their Web courses; and is also available to the DE students, to help them get started with the new technology, and to assist them along the way if they have any technical problems. Since this is an evolving technology, this specialist also helps introduce faculty to new capabilities, options, etc. that can enhance their Web classes.
5. The University has a full-time, professional staff available for the development, design, and operation of WBE courses.
6. Our staffing is all students at the moment {graduate assistants}... We will have, in the School of Education, a full time person in the technical area of web design in Spring 2000.

QUESTION 3:

UPON WHICH MODEL OR METHOD DOES YOUR SCHOOL BASE ITS WBE PROGRAM?

1. WebCT.

2. None.
3. (No answer given.)
4. Currently, the SLIS is using Web-CT software, mounted on the School's server. Pedagogical approaches vary, depending on the nature of the course/material and the style of the individual faculty member.
5. The University uses CourseInfo.
6. Our model is to supply information which would be regularly delivered in a class context. We include readings, web links, and sometimes sound using the TopClass software. We supply students with password secured email and discussion groups. We do not use CHAT rooms.

QUESTION 4:

HOW ARE THE FACULTY AND STAFF MEMBERS TRAINED IN WBE TECHNOLOGY AND DELIVERY/TEACHING METHODS?

1. Workshops provided by the central academic computing facility.
2. Basically self taught, although the University provides training courses.
3. No, that is why we applied for funding for a January Institute. We are going to be able to train our faculty and 30 from across the country.
4. Distance ed. coordinator works individually with faculty members in preparing their courses. The coordinator also regularly offers workshops to groups of SLIS faculty members on WEB techniques and enhancements. In addition, the University itself has a major resource center dedicated to introducing faculty to and assisting them with new teaching technologies. This entity also offers numerous workshops for faculty on a continuing basis. It includes coverage of teaching methods, as well as technology. Another important resource for faculty teaching the web classes is other faculty who have done so. Sharing information about perceived successes and problems is very important to helping fellow faculty members refine their courses and providing "moral" support.
5. The University's Center for Instructional Design and Distance Education (CIDDE) has a full service staff to train and support faculty and staff in WE technology and delivery/teaching methods.
6. Short courses offered through the Teaching and Learning Center as well as self taught.

QUESTION 5:

WHAT ADDITIONAL COMPENSATION DOES FACULTY AND STAFF RECEIVE FOR WBE PARTICIPATION?

1. None other than release time from teaching (1 course per semester).
2. None.
3. None.
4. Typically, one course reduction the first time a course is introduced in a web-based format.
5. N/A
6. For distance-education courses and sections, faculty receive a course reduction and in summer an additional financial stipend.

QUESTION 6:

HOW ARE THE OBJECTIVES OF THE WBE PROGRAM MONITORED AND MAINTAINED? WHAT IS THE GOVERNING BODY OF THE WBE PROGRAM?

1. Curriculum committee and dean.
2. Part of the ongoing curriculum of the School. No special administrative structure.
3. Faculty must have their courses evaluated by students and peers as a part of the regular process. WEB program classes are treated the same as other classes. We don't have one.
4. At this time, the web-based courses do receive additional scrutiny, both routinely by the distance ed. coordinator and the School administration, and also through the study of web-based classes noted above. However, class sections offered in a web-based format are an integral part of the regular curriculum, and are evaluated in the same manner and through the same mechanisms as any other class-- including semester-end course evaluations--, and are under the same governance, through the School's Curriculum Committee, Faculty council, and Administration.
5. N/A
6. The governing body is the curriculum committee of the department and ultimately the faculty. All distance education courses including WBE are evaluated by student evaluations distributed by the Division of Continual Learning.

QUESTION 7:

PLEASE INCLUDE ANY ADDITIONAL COMMENTS SPECIFICALLY CONCERNING FACULTY AND STAFF OR GENERALLY CONCERNING WEB-BASED DISTANCE EDUCATION.

1. Our web-based courses will include elements of 2-way video/audio conferencing.
2. Our current DE effort is primarily compressed video. Our first two pure WBE courses are scheduled for next Summer.
3. [No answer given.]
4. Again, please see the attached description of the study of web-based classes that we are conducting. Another very important issue, which that study will look at, but which is not addressed here, is the impact on and implications for STUDENTS who are taking the web-based classes.
5. Many of the current course offerings are not conducive to WBE. We are looking at ways to bring continuing education offerings to the Web rather than masters level courses.
6. Web based education is very TIME-intensive for faculty since students have access all the time to faculty through email and discussion groups.

NOTE:

Respondent Number 7 chose not to answer the questions but rather stated:

“The answer...is short at this point. Right now the faculty feel that the classroom and the student interaction in the class are important. So, while classes may be augmented with the WEB, we do not offer web-based classes. Things could change..”

SECTION 3 – APPENDIX D

SURVEY OF WBE STAFF STRUCTURE IN NORTH AMERICAN LIBRARY AND INFORMATION SCIENCE SCHOOLS

RESPONDENTS:

1. Catholic University of America, Washington D.C., School of Library and Information Science
2. Louisiana State University, School of Library and Information Science
(Bert Boyce)
3. North Carolina Central University, School of Library and Information Science
4. San Jose State University
5. The University of Washington, Graduate School of Library and Information Science
6. University of Wisconsin at Milwaukee, School of Library and Information Science
(Susan Simkowski, Distance Learning Coordinator)
7. University of North Carolina – Greensboro, Department of Library and Information Science
8. University of Milwaukee Wisconsin at Milwaukee, Graduate School of Library and Information Science
(Judith J. Senkevitch, Associate Dean and Associate Professor)
9. University of Alabama
10. Texas A & M University – Commerce
11. Louisiana State University
(Tammy Adams)
12. University of North Texas, Center for Distributed Learning
13. Connecticut State University
14. The University of Illinois, Graduate School of Library and Information Science
15. Texas Women’s University, School of Library and Information Science
16. University of Oklahoma – Norman, School of Library and Information Science
17. University of Kentucky – Lexington, School of Library and Information Science

QUESTION 1.

WHAT STAFF DO YOU USE TO SUPPORT YOUR WEB-BASED DISTANCE EDUCATION PROGRAM?

1. Central Academic Computing Staff Are Used For Training in Web-Based Technologies. No Other Staff Are Used.

2. The School has a full-time computer resources coordinator who assists faculty when requested. Faculty have G. Student assistance. The faculty development center will also offer advice and assistance on request.
3. Instructional design and IT staff the University's Teaching and Learning Center. We also rely on our own Information Resources and Technology staff in the School.
4. We use no additional staff than what we already have -- that is, we don't hire extra staff for distance faculty. However, they do have part-time student help. At this time we do not have a Distance Education program that is entirely Web-based.
5. We don't have a full Web-based program at this point in time. We have some certificate courses that are supported through Educational Outreach. Our plans are to have a staff person as part of our systems group.
6. Generally staffed by dept. Our SLIS has a FT staff person; the technology center has 3 staff members devoted to Web (although not entirely for distance ed.); we are also borrowing a half-time project manager for an online pilot project.
7. We Use Graduate Assistants who work with Our Administrative Secretary. Each Faculty Member who teaches on the Web...has a twenty Hour a week Graduate Assistant.
8. A full-time distance ed. Coordinator, with an MLIS Degree and several years experience working with Web-based Education for professionals. This person has access to Grad. Student help, in addition, as needed.
9. Our Associate Director coordinates the online program, and we maintain a suite of web masters. These are talented students working part-time putting courses online.
10. Graduate assistants are allocated to departments for assistance to faculty. Our department, instructional technology, has five full-time staff positions. These positions are: an instructional designer, a software/technology specialist, a technology support coordinator, an administrative assistant, and my position, director. In addition, the department of Computing, Telecommunications, and Information Systems has support staff available to handle any networking problems. We are requesting a new position next year (2000-2001). This position will be a student support services coordinator and will maintain a "personal" contact with students at a distance. We handle all Web-based instruction, as well as two-way interactive video instruction, and all instructional technology on campus.
11. Staff members from the Division of Instructional Support and Development.
12. Associate VP Distance Ed - PT - \$\$?
Associate Director - FT - \$53k
1 - Instructional Designer - FT - \$35k
2 - Instructional Consultants - FT - \$33k
1 - Instructional Programmer - FT - \$35k
1 - Instructional Media Specialist - FT - \$32k
7 - PT Student Hourlies - \$8 - \$10/hr
PT duties include programming (html, dynamic html, javascript, java), text editing and placement, graphic design, layout, illustration, photo and audio/video shoots, audio/video capture and compression
13. An executive officer manages the operation at the system office (coordinating the efforts of the four Connecticut State Universities. There is also a student services coordinator and a finance support person, and we are hiring an administrative coordinator
14. I'm sorry not to answer, but we don't separate our distance program from our on-campus for support, so it is difficult to give you answers as your questions are phrased. I can say that our LEEP3 program allowed us to hire 3 new full-time people with salaries ranging from \$28,000 (intern position) to \$60,000, but they are

assisted by and in turn assist, other staff in our school. There is an internal staff training program conducted by the director of instructional services.

15. [Name of school] does not offer a fully Web-based program in library science. We do Web components of varying degrees in a number of courses. My opinions about what a Web-based program would cost would be mere conjecture. I look forward to your report on the actual facts you discover.
16. At this time we do not have a Distance Education program that is currently Web-based.
17. At this time we have no Web-based distance Ed program.

QUESTION 2:

HOW ARE THESE POSITIONS STAFFED (FULL TIME OR STUDENT)?

1. Full Time Staff in the Academic Computing Center.
2. Both.
3. Full-time, part-time, and students from the Educational Technology program in the School of Education and the Master of Information Science degree program in our School.
4. Student part-time
5. Full time (planned).
6. The above [See Answer 6, QUESTION 1] equals 3.5 F[ull] T[ime].
7. Students.
8. See above [Answer 8, QUESTION 1.]
9. (see #1) [Answer 9, QUESTION 1.]
10. See above. [Answer 10, QUESTION 1].
11. Both.
12. [No response given.]
13. Executive Office and student services coordinator are full-time. Finance support and admin coordinator are part-time. There is also part-time support of a marketing person. At each of the universities, the effort is supported by the registrar's office at one, and by the continuing-education office at the other three. All staff take on these responsibilities along with their regular on-ground responsibilities.

QUESTION 3:

HOW MANY ARE ON THE STAFF?

1. Three People Are Responsible for Training.
2. Each faculty member has a GA, the two working on development of WBE courses under a grant have an additional 20 hour GA.
3. University has about four persons in the Teaching Learning Center and my School has one person with part-time support from graduate students.

4. We have a Director of Technology and two lab technicians. We currently have two part-time students helping faculty with distance classes.
5. Two current IT staff - professional level.
6. 3.5
7. At least two Graduate Assistants.
8. See above. [Answer 8, QUESTION 1.]
9. Currently, four.
10. See above. [Answer 10, QUESTION 1].
11. Currently, there are 7.
12. [No response given.]
13. At the system office, 2 FT and 3 PT

QUESTION 4:
IS THERE A SPECIAL STAFF TRAINING PROGRAM?

1. It Is on Demand by Academic Units.
2. No.
3. Yes, but we contract this program out.
4. No.
5. No.
6. Yes.
7. No.
8. Not sure what is meant here by staff. The DE coordinator gives workshops and individual help to our faculty. Also our university has a center which provides technology training opportunities for all faculty. The latter sessions include faculty sharing their experiences and expertise with other faculty on campus.
9. No, but we require a certain level of computer training before hiring. Also, we give informal training on a regular basis.
10. The training for web-based instruction has mainly been OJT. However, as we formalize our institutional plan for distance learning, I am certain a training program will be a component. In other words, we are all still learning...
11. Yes

12. Yes, for students we have an orientation to the Center procedures/policies and network setup. Formal training for faculty is provided by the instructional consultants on a regular basis; one-on-one training is provided by request; WebCT support on a daily basis.

13. No

QUESTION 5:

HOW MUCH ARE THEY PAID (GENERAL SALARY RANGE).

1. \$40-\$60k

2. Coordinator at \$32,000 per year. 12-hour GAs at \$500 a month. 20-hour grant GAs at \$1000 a month.

14. I assume that when you say they, you are talking about all staff.

Systems/Network (University) \$40-50,000.00

Instructional Design (University and School of Education) 1 \$40,000.00 and 1 \$48,000.00).

Information Resources Manager (SLIS) \$60,000.00

Server Manager \$38,000.00

Part-time students \$30,000.00 (SLIS)

As you see, we make use of the university's resources and we also serve as a university-wide resource also.

We serve as the model instructional program, so we offered workshop for other department/schools on planning and delivery of distributed learning. We used Black Board as a course manager. They provide the training for use of the system and some related technical matters for the faculty. I am also considering e-college for potential partnership reasons.

4. Our head of technology makes about \$70,000 per year, lab technicians about \$35,000 per year, student assistants get \$10 per hour

5. (No Answer)

6. Low to mid 30s. Half time project manager and directors are not in this range.

7. No answer given.

8. Who? The DE coordinator is in the mid 30ks -- not enough.

9. Minimum wage with six-month increases.

10. Typically, our folks' salary range is \$30,000-35,000. Graduate Assistants' salaries vary depending on whether they are master's- or doctoral-level

11. Full-time staff, estimated range 35-60k. Student, estimated range \$5.15-7.00 per hour.

12. (No Answer)

13. (No Answer)