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Perceptions of active graduate faculty at a research extensive university regarding electronic submission of Theses and Dissertations (ETDS)

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PERCEPTIONS OF ACTIVE GRADUATE FACULTY AT A RESEARCH EXTENSIVE UNIVERSITY REGARDING ELECTRONIC SUBMISSION OF THESES AND DISSERTATIONS (ETDS)

A Dissertation

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by
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DEDICATION

This dissertation is dedicated to my parents:

Dr Ernest Goldsmith (Ernst Goldschmidt) (1892 – 1954) Senior Psychiatrist, State of New York. Ph.D. in Economics, Munich, Germany 1916; Dr Juris (LLD) from Heidelberg, Germany 1919; MD from Prague, Czechoslovakia 1927; Research fellow Montefiore Hospital, New York 1928 & 1929; Winthrop fellow Yale, 1930 – 1932 and Potschick fellow Prague, Czechoslovakia 1932 – 1938. Joint author of The Heart Rate, Yale Press and C. C. Thomas, Springfield, Ill.& Baltimore, 1932.

Areas of research: Heart Rate influence of anesthesia on circulation, legal medicine, and neurology

Dr Edith Goldsmith (1913 – 1953) Ph.D. in Music (violin) 1932 from the Conservatory of Music, Buda Pest, Hungary; Ph.D. in Pharmacology, University of Prague 1937; and MD Columbia College of Physician and Surgeons 1945. Certified translator for the state department during World War II.

This dissertation is also dedicated to the martyrs of my family, those murdered before and during the Holocaust and my uncles during a raid in Titel, in former Yugoslavia, in 1942.

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ABSTRACT

This study investigates and explores faculty perceptions toward Electronic Theses and Dissertations (ETDs) during the implementation of ETDs at a university located in the southern portion the United States. Louisiana State University and Agriculture and Mechanical College (LSU) is the flagship university for the state of Louisiana and one of only 25 universities nationwide holding both land-grant and sea-grant status. The Carnegie Foundation for the Advancement of Teaching classified LSU as Doctoral/Research Universities-Extensive.

Chapter 1 provides the rationale for this study, the importance of higher education, the importance and role of the faculty advisor in graduate education as influencing the effectiveness of research as collaborator by offering his or her interest, motivation, ability, and preparation in assisting the graduate masters or doctoral student. Chapter 2 examines the current literature concerning the emergence of ETDs, the move to ETDs, and the reasons for a needs assessment from faculty, and anatomy of a ETD as they apply to the changing realities and diffusion of innovation in higher education. Chapter 3 presents the methodology and description of the population sample, instrumentation, and data analysis applied in/to the study. Chapter 4 investigates the findings of the study by analyzing by SPSS each answer to survey questions, as was statistically appropriate and further studying if any significant relationships existed between two select variables. Chapter 5 provides the summary, conclusions, and future recommendations. The appendices contain select answers to the survey questions by diverse faculty. As one responded said, “This is the 21st century, hop on board.”

CHAPTER 1

INTRODUCTION

Rationale for This Study

Importance of Education

In a 2001 presentation entitled *The Importance of Education in Today's Economy* at the Community Affairs Research Conference of the Federal Reserve System, Alan Greenspan made the following remarks regarding the importance of education:

> One challenge we face in expanding opportunity for all Americans is to overcome the anxieties created by technological innovation. In the workplace, for example, significant segments of our population have exhibited fears that their skills will not be adequate to deal with a rapidly changing work environment. Clearly, technological advances make some jobs obsolete--for example, switchboard operators and tenders of typesetting machines. But even for many other workers, a rapidly evolving work environment in which the skill demands of their jobs are changing can lead to very real concerns about losing their jobs.
>
> One very tangible response to this anxiety has been a massive increase in the demand for educational services. The day when a high school or college education would serve a graduate for a lifetime is gone. Today's recipients of diplomas expect to have many jobs and to use a wide range of skills over their working lives. As a result, we are moving toward a more flexible educational system--one that integrates work and training and that serves the needs both of experienced workers at different stages in their careers and of students embarking on their initial course of study. . . . As in the workplace, fostering education will enable individuals to overcome their reluctance or inability to take full advantage of technological advances and product innovation. . . . Education can play a critical role in equipping consumers with the fundamental knowledge required to choose among the myriad of products and providers (in our society). (Greenspan, 2001).

The country's vitality depends upon a well-educated citizenry. At the Constitutional Convention in Philadelphia, Thomas Jefferson wrote to a friend: "No surer foundation," he said of education, "can be devised for the preservation of liberty

and happiness." Education's goal is to provide citizens with the knowledge, attitudes and skills needed for living in and contributing to a democratic society.

According to former U.S. President Bill Clinton, the best way to strengthen democracy worldwide and to meet the challenges of the 21st century "is to guarantee universal, excellent education for every child on our planet . . . Education is essential to creating a worldwide middle class. It is essential to global prosperity. It is essential to fulfilling the most basic needs of the human body and the human spirit. That is why the 21st century must be the century of education and the century of the teacher" (Clinton, 1998). Clinton noted that a technological revolution is sweeping across the globe and that:

> It is changing the way we live and work and relate to each other. It is binding our economies closer together, whether we like it or not. It is making our world smaller. With all these changes come new challenges . . . with technology advancing at rapid speed, the best jobs and the best opportunities will be available only to those with the knowledge to take advantage of them. We know that if we do not take action, dangerous opportunity gaps between those people and those nations who have these skills and those who do not have them will grow and deepen. (Ross, 1998).

President Clinton spoke on 29 July 1998 at the Washington Hilton to 1,000 educators from around the world who were attending the second annual meeting of the Education International World Congress.

Importance of Higher Education

Higher education is an open system with advanced learning as its core purpose. This system has evolved into a highly complex set of institutions that have organized to achieve this core purpose (Hanna, 1998). In higher education junior colleges

provide job skills training, classes for students who move on to a four-year college or university, for older workers seeking to retool or retrain, and for the pure pleasure of education. This responsibility then extends at some future point in time to a college or university. Higher education can be for general education, transitional education (remedial), career education (vocational and technical fields), special education (to guide the disadvantaged and/or disabled), transfer education for those moving higher on the education hierarchy to a four year college or university, or community service education (which allows for enriched environment by offering vocational, recreational and cultural programs) (Hooker, 1997).

Universities and colleges are integrally linked to the future economic, cultural, and social growth of the U.S. Investments of scarce state government resources are needed and higher education must be an important part of the government agenda and be considered a major industry of any state. Higher education is about future scholars and scholarship. Higher education is also consumer-oriented and at a later time will pump dollars back into the state economy through purchasing; capital improvements; and spending for services and products by faculty, staff, and students (Hanna, 1998).

While there are more than three thousand traditional education institutions in the U. S., they vary greatly in mission, size, curriculum, selectivity, faculty expertise and background, level of offerings, and type of location. However, they share a number of characteristics that serve to define them as a group. In the past traditional colleges and universities have been composed of a residential student body, from a recognized geographic service area from which the majority of students are drawn.

Traditional colleges and universities are composed of full-time faculty members who organize curricula and degrees, teach in face-to-face settings, engage in scholarship, often conduct public service, and share in institutional governance. In addition, there is a central library and physical plant. Most have non-profit financial status and evaluation strategies of organizational effectiveness based upon measurement of inputs to instruction, such as funding, library holdings, facilities, faculty-student ratios, faculty qualifications, and student qualifications. Traditional universities have students attend campuses with classrooms where a teacher teaches. Many traditional universities attract students from across the globe, but they are not called global universities because students must come physically to a campus. This physical campus for the most part operates within a recognized geographic service area and within a specific local cultural context (Hooker, 1997).

In contrast to the historic model, the author Michael Hooker describes seven emerging organizational models of higher education. All of these models are designed to meet the growing demand for improved accessibility and convenience among learners, lower costs, direct application of content to work settings, and greater understanding of the dynamic complexity and often interdisciplinary nature of knowledge and where it is being dispensed as a service. They include extended traditional universities, for-profit adult-centered universities, distance education/ technology-based universities, corporate universities, university/ industry strategic alliances, degree/ certification competency-based universities and global multinational

universities. Not all of them are fully developed, but all have potential to develop in the future (Hooker, 1997).

Technology will change the way life is ordered. It has moved society toward a different kind of economy and modified ways of living. Society today is in the midst of changing from an energy-based to a knowledge-based economy (Hooker, 1997). Universities and institutions face two challenges: first, harnessing the power of digital technology, and then responding to the information revolution. For higher education, structural change is the result of the confluence of two forces. One force is the information revolution, which is driving the shift from an energy or industrial based economy to knowledge based economy. This change creates economic value in the form of jobs for work force. In a knowledge based economy, information or knowledge creates economic value. The other force still active was set in motion after World War II by W. Edwards Deming and is called the management revolution (Walton, 1986).

Corporations and higher education work best when they are fully engaged with each other. Higher education provides research and work force education and preparation, and corporations can provide funding and needed faculty and tools to higher education to accomplish their work. This total engagement is a win-win situation for higher education corporations and government. In the past, higher education has sometimes not responded quickly enough to industry's demand and industry has not always backed up needs with action. However, in the future, higher education's best role is to develop interaction through its information technology (IT)

relationships. An example would be to have experts on university advisory boards; an interactive relationship where higher education and the business community articulate their broader needs more effectively. A stronger future solution lies in the Information Age work force harnessing the strengths of industry, higher education, and government (Hooker, 1997).

Role of Graduate Education in Higher Education

Graduate education functions through extended study for students to acquire greater understanding of some area or topic. For example, master's education is generally a two-year program consisting primarily of coursework and seminars focused in specific fields of the arts and sciences as well as areas such as business, engineering, and social work. Graduate professional education in areas such as law or medicine provides training necessary for the practice of those professions. The Doctor of Philosophy (Ph.D.) or doctoral degree differs from masters and professional education. The Ph.D. is a research degree, signifying that the recipient has acquired the capacity to make independent contributions to knowledge through original research and scholarship (Committee on Graduate Education, 1998). American graduate education is considered to be the world's best. Students from around the globe come to the United States to prepare themselves for careers in academia, industry, and other sectors. The overriding purpose of graduate education is and must always be the education of graduate students. Graduate education that crosses academic disciplines is the principal source of the faculties of the country's colleges and universities. The U.S. has built the largest and most accessible system of higher

education in the world. Graduate programs and university administrators should hold graduate students paramount since they are the next generation of scholars. Graduate students learn to teach and to conduct research by performing these activities under faculty mentorship (Committee on Graduate Education, 1998).

After World War II and into the early 1970s, graduate education experienced unprecedented growth. This growth leveled off during the late 1970s and the first half of the 1980s, but it has increased steadily for the last decade. In 1995, the number of recipients earning PhDs reached an all-time high of 41,610. The growth in recipients earning PhDs has been accompanied by increased participation of women, minorities, and foreign students. Over the last decade, the number of PhDs awarded by U.S. universities to foreign students has increased at more than twice the rate of PhDs awarded to U.S. citizens (Committee on Graduate Education, 1998). Graduate education prepares the scientists and engineers needed by industry, government, and universities to conduct the nation's research and development; educates the scholars in the humanities, social sciences, and the arts who preserve and enlarge the understanding of human thought and the human condition; and develops the scholars in all disciplines who become the faculties of the nation's colleges and universities (Committee on Graduate Education, 1998).

Support for graduate education from a number of external sectors plays a critical role in sustaining the quality of graduate education: The federal government provides valuable support for graduate education through competitively funded fellowship and traineeship programs, research assistantships funded through the

federal research project grant system, and student loans that augment and fill in gaps in other sources of financial support. States support graduate education primarily through teaching and research assistantships at resident public universities. States also support graduate education indirectly through research and development investments and graduate fellowship programs, which may be available to students attending both public and private institutions. Lastly, private foundations enable universities to embark on new and continuing initiatives. Industry support provides financial assistance to students and graduate programs while fostering university-industry research connections and exposing students to industrial career opportunities (Committee on Graduate Education Report, 1998).

Importance/ Role of the Faculty Advisor in Graduate Education

The dissertation is central to a graduate student's career and, therefore, of utmost importance for the design of graduate programs. Faculty members play a crucial role in guiding graduate students toward making their own original contributions to scholarship by completing the dissertation in partial fulfillment of the Ph.D. degree. "Many departments provide for a committee structure that is a built in safeguard against the danger of the student slipping between the cracks " (Harvard Graduate School of Arts and Sciences, 1998). Mentoring is the ideal graduate student-professor relationship (Hawley, 1993). A successful student does not reach his or her goals alone. There is, ideally, one professor that the student can refer to as a mentor. (Repak, 2000).

Unfortunately, graduate and professor relationships fall short of the ideal on many major university campuses. One reason is that over the years higher education has shifted from an emphasis on interactive relationships and teaching to competition within departments and schools with the emphasis on research and publishing. Wilhelm von Humbolt, father of the German academy, described the change as deterioration in personal commitment to graduate and professor relationships and the development of a university system that tends to alienate the two groups (von Humbolt, 1969). Another has been the tenure or no tenure debate that is undermining the profession of college/university professor. In some cases it leads to an itinerant life for the major professor at a time when a student needs stability.

Lack of communication between a student and adviser may be caused by a break down in dialogue stemming from personality differences, lack of understanding of stresses, the size of the university, and/or the expectations that administrators have for faculty assignments (Hawley, 1993). This communication is essential for faculty to stimulate the student's interest and strengthen the student's commitment to the completion of their research.

In their research on graduate student retention and eventual completion of their degree, Girves and Wemmerus (1988) discuss the certainty that a student's commitment to earning a degree in a particular discipline is continually modified by his or her experiences in that department. What the faculty do to stimulate the student's interest and to strengthen the student's commitment may ultimately determine the level of degree progress achieved by students (Girves & Wemmerus, 1988). As

students, departments, and faculty bear joint responsibility for the dissertation process, it is critical for departments to be involved in establishing and maintaining suitable and clear structures for the all-important student-faculty advising relationship (Harvard Graduate School of Arts and Sciences, 1998).

Factors Influencing the Effectiveness of Advisor

Many books have been written about how to proceed with writing a dissertation and former dissertation writers write many more. Peggy Hawley in her book, *Being Bright is Not Enough: The Unwritten Rules of Doctoral Study*, has written about factors influencing the effectiveness of advisors in the form of desirable professional characteristics. She points out that "the person with whom you align yourself should be knowledgeable about the field of inquiry" (Hawley, 1993, p. 54). The advisor preferably should be a full professor since senior faculty sit on the most influential committees, teach the preferred classes and establish policy for the department. They should both have desirable personal characteristics and they should be accessible, organized, and if possible warm and friendly, but a good mentor first. (Hawley, 1993, p 56-58). Basically, the advisor should be interested, motivated, able, and prepared.

Interest/ Motivation

S/he should be interested in the subject that is being written about. The advisor must have the motivation and have time to aid the student as a mentor. The advisor should be interested in the candidate as a person and interested in the student's welfare, both as a person and as a scholar.

Ability

S/he must understand the research process and game rules and apply them fairly. One should be an excellent mentor to the student. The advisor should have personal integrity and view the advisor role as an important responsibility, deserving of a faculty member's attention.

Preparation

S/he will have completed the research phase and understand the problems and steps in preparing a good theses or dissertation. The advisor should be competent to advise on the topic. S/he should be capable of reviewing the research and giving sound advice. The advisor should have a reasonable level of expectation regarding what a student can and should accomplish. S/he should read and comment on the work within a reasonable time period. S/he is constant about requirements and does not constantly change or add to them (Davis & Parker, 1997). The advisor should attend conferences, publish, and keep her/himself computer literate and know of impending changes so that s/he can represent her/his craft intelligently.

How to Know What Preparation is Needed

The implementation of Electronic Thesis and Dissertations is an advancement in the use of technology in furthering graduate education. Any change/advancement requires some preparation of the incumbents in the field. The same is true of graduate

advisors in use of ETDs. One can determine the exact content of this preparation needed for any advancement can be accomplished in several ways:

a. Assessment by Identifying Deficiencies Using Achievement Test

If a clear set of skill and knowledge are needed to adopt the innovation, a test could be administered to the individuals to identify the needed training. This is difficult to do in this situation with faculty. Normally it would be in the form of a Readiness test that would be administered prior to instruction or training in a specific technical area in order to determine whether and to what degree a faculty member is ready for, or will profit from instruction (Gay, 1981). This would be difficult to gauge with this type of test since faculty would resist it.

Next would be the possibility of character and personality tests that are designed to measure characteristics of individuals along a number of dimensions and to assess feelings and attitude toward self, others, and a variety of other activities, institutions, and situations. Keirsey is an example. Another test is the Myers-Briggs Type Indicator Instrument which provides a useful way to describe personalities by looking at their preferences on four-scales (extraversion vs. introversion, sensing vs. intuition, thinking vs. feeling, and judging vs. perceiving). This would not be useful for our purposes. Additional types of tests can be Non Projective tests which are attitude scales that attempt to determine what an individual believes, perceives or feels. For example, four types of scales can be used: Likert scale, Semantic Differential scales, Thurstone scales, and

Guttman scales. This would be the test of preference in this case, however a survey of their perceptions would do this better (Gay, 1981).

b. Expert Opinion

In some cases experts can be used to identify the needed in-service training - especially in a well-developed area. The newness of ETDs makes this a questionable technique in this situation. Edward Fox, John Eaton, and Gail McMillan are responsible for implementing the FIPSE grant and work with ETDs at Virginia Tech. They are both innovators and experts (Rogers, 1995).

c. Perceptions

In many instances especially those where attitudes may be an important part of the in-service needs, determining the individuals' perceptions of the innovation and perceived level of expertise is most useful. One way to find out about their perceptions is by survey. A survey is an attempt to collect data from members of a population in order to determine the current status of that population with respect to one or more variables. A variable is a concept that can assume any one of a range of values, i.e. intelligence, height, aptitude (Gay, 1981). This survey will aid in the innovation-decision process in planning. It might forecast the rate of adoption as adapted by each department for example. It will further supply the ability to place adopters into adopter categories (Rogers, 1995).

This Needs Assessment Survey is to obtain statistics regarding the faculty perceptions of the process in order to better encourage users of the new system of storage and access of ETDs. In addition, the data from this Needs Assessment Survey will also show the researcher what areas to focus on in ascertaining concerns about the new process that is being created so as to assuage the fears and shortcomings found by those surveyed.

Statement of the Problem

Electronic learning readiness of faculty is essential. To provide the next generation of scholars as teachers and researchers, it is necessary that they be involved in electronic publishing of their research documents at the masters and doctoral level. The faculty is involved in self-directed learning of electronic media while in graduate school or later after graduate school. It is therefore not known to what extent these skills have been learned and adopted by the current diverse faculty of this research extensive university. The assessment of faculty perceptions toward current learning levels of knowledge concerning computers, and attitudes concerning the use of electronic storage and access to theses and dissertations, could then result in in-service teacher education programs and improved services for graduate students.

Purpose

The primary purpose of this study was to determine the perceptions of the faculty in a research extensive university regarding the advantages, disadvantages, and needed preparation and support for the implementation of a system of electronic submission for theses and dissertations within the institution.

Objectives

Specific objectives formulated to guide the researcher include the following:

1. To determine attitudes toward using new technologies in their teaching and research by faculty members in a research extensive university.
2. To determine attitudes of graduate faculty in a research extensive university toward ETDs.
3. To determine familiarity with and knowledge of ETDs by the graduate faculty members in a research extensive university.
4. To determine the self-perceived level of expertise in using software technology associated with ETDs of graduate faculty members in a research extensive university.
5. To determine the options that students producing ETDs should have for granting access to their ETDs as perceived by graduate faculty members in a research extensive university.
6. To determine whether or not selected delivery methods should be used to educate graduate students about ETDs as perceived by graduate faculty in a research extensive university.
7. To determine whether or not faculty training is needed in the use of software as perceived by graduate faculty in a research extensive university.
8. To determine from graduate faculty members in a research extensive university about their perceptions regarding five psychological reactions to ETDs as a concept.

9. To describe graduate faculty members in a research extensive university on selected aspects of their scholarly productivity.

10. To describe faculty in a research extensive university on selected personal and professional demographic characteristics including the following:

a. Age

b. Gender

c. Ethnic group

d. Highest level of education completed

e. Academic rank

f. Earned tenure at LSU

g. College, department and discipline

h. Administrative appointment concurrent with faculty appointment and what they are

i. Number of master students committee chair for at present

j. Number of doctoral students committee chair for at present

k. Time spent in an average school semester week doing teaching, research, administration, and service

l. Number of credit hours they taught this semester

m. Number of courses taught this semester

n. Official university assignment hours percentages for teaching, research, administration, and service

o. Average number of hours worked in a typical week as chair for a masters or

doctoral student

p. Total number of years in their career as committee chair for masters or doctoral students

11. Determine if significant relationships exist between perceptions regarding ETDs among active graduate faculty in a research extensive university and each of the following personal and professional demographic characteristics: Age; Gender; Academic Rank; Earned Tenure; Number of master students committee chair for at present; Number of doctoral students committee chair for at present; Time spent in an average school semester week doing teaching; and Years served as graduate advisor for masters and/or doctoral students years.

Definition of Terms

1. **Adobe Acrobat** is a software program that allows for the transfer of documents created in any electronic software package that prints through Windows (i.e., word processors and other text processors) to be made available on the World Wide Web. The documents can be downloaded and read using the Adobe Acrobat Reader, which is available for free downloading on the Web. It retains all formatting and graphics and may even allow for hot links and annotations. In addition, Adobe Acrobat files can be indexed and searched by key words.

2. **Doctoral/Research Universities—Extensive**: These institutions typically offer a wide range of baccalaureate programs, and they are committed to graduate education through the doctorate. During the period studied, they awarded 50 or more

doctoral degrees per year across at least 15 disciplines. [On Line]. Available: http://www.carnegiefoundation.org/ Classification/index.htm and click on "Millenial Edition".

3. **GOOGLE** - Google is a search engine and says on its home page that it can "Search 1,346,966,000 web pages" including PDF documents on the web. The "advanced search" feature allows for search options such as exact phrase, etc. ("Exact phrase" is especially useful when trying to identify quotations.) Google is testing an image search engine. Take a look at "preferences" which provide languages searching and other options.

4. **Mentor -** A mentor is a person with greater rank or authority than the student and has influence in his or her field and who commits time, emotional support, and intellectual ability to encourage growth and development in the subordinate student. Hawley, P. (1993). Being Bright is Not Enough: The Unwritten Rules of Doctoral Study. Springfield, Ill.: Charles C. Thomas Publisher.

5. **NDLTD** – The Networked Digital Library of Theses and Dissertations is an initiative whose purpose is improving graduate education by developing accessible digital libraries of theses and dissertation. Other objectives are to improve graduate education by allowing students to produce electronic documents, use digital libraries, and understand issues in publishing; to increase the availability of student research for scholars and to preserve it electronically; to lower the cost of submitting and handling theses and dissertations; to empower students to convey a richer message through the use of multimedia and hypermedia technologies; to empower universities to unlock

their information resources; and to advance digital library technology. NTLTD's web site is at http://NTLTD.org/

6. **Self Directed Learning**, according to Malcolm Knowles (1975), is a process "in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes." Knowles, M. (1975, p 18).

7. **University Microforms, Incorporated (UMI) -** Bell and Howell Information Systems (formerly UMI). "UMI" collects and distributes information via microform (both microfilm and microfiche), magnetic tape, paper, CD-ROM, and online, through ProQuest Direct, which enables users with a computer and a modem, or an Internet connection, to conveniently access UMI's vast collection of journals, periodicals, magazines, newspapers and other information sources. That information is available in image, text, and a unique UMI format that combines searchable text with graphs, charts and photos. UMI's web site is at http://www.umi.com/hp/AllAboutUMI.html.

CHAPTER 2

REVIEW OF RELATED LITERATURE

The Emergence of ETDs

Electronic theses and dissertations, or ETDs, can be defined as theses and dissertations submitted, archived, or accessed in electronic formats (NDLTD, 1997a). These can be as simple as traditional word-processed or typewritten and then scanned documents ("plain vanilla,") (Fox, E. A., J.L. Eaton, G. McMillan, N.A. Kipp, P. Mather, T. McGonigle, W. Schweiker, & B. DeVane, 1997), which are then made available in Print Document Format (.pdf), as well as increasingly in multimedia formats. Theses and dissertations by masters and doctoral students are final papers that are published electronically. ETDs are different from print format as to production (final step of submittal), storage, and dissemination of those works (access) (NTLTD,1997a).

The thesis or dissertation for most masters or doctoral students is the first major scholarly work they produce. In order to make these works more readily available to other scholars, as well as to save money and space/ storage space, many universities and libraries are now making digitized (or electronic) versions of print work available. Some universities or colleges are even "grand fathering" in, for students who produced work prior to the new storage and access media (ETDs), the ability to have their print format scanned and made available on-line for improved access to their previously completed work. Students are using technology in their work in the form of added multimedia enhancement (Virginia Tech Graduate School's

Electronic Dissertation Manual, 1999). The advantage of ETDs also lies in the exposure of their thesis or dissertation for students looking for jobs in the job market as example of their research ability.

Since 1997, students have produced thousands of ETDs. They have submitted them as originals or by proxy on the part of their school to Bell and Howell Information Systems (formerly UMI) where they are scanned and made available electronically for a fee. Over the years few of these documents have reached ten copies in requested sales from UMI. That means that most theses and dissertations, after they are copied in microfiche for the submitting school, are never requested in mass for a fee. However, according to UMI, electronic theses and dissertations are becoming the way of the future for University Microfilms International (UMI, 2000).

Virginia Tech started planning its Electronic Thesis and Dissertation (ETD) Initiative in 1987 after a meeting with UMI at Ann Arbor, Michigan. Virginia Tech ran pilot studies in 1994 and hosted a workshop sponsored by the Southeastern Universities Research Association (SURA). Virginia Tech began accepting ETDs in 1995 on a voluntary basis. Late in 1995, SURA agreed to contribute funds to launch an ETD effort in the Southeast. The Faculty Development Initiative, which trains all Virginia Tech faculty members in advanced computer, communications, and educational technologies, began training faculty to help with ETDs in the summer 1996 (Virginia Tech Graduate School's Electronic Dissertation Manual, 2001). Virginia Tech's Commission on Graduate Studies and Policies established in spring 1996 the requirement that all ETDs submitted after 1996 must be in electronic form.

In September 1996, FIPSE (The Fund for the Improvement of Postsecondary Education, Office of Postsecondary Education, U.S. Department of Education) funding began.

FIPSE support had enabled a small pilot effort, providing a grant of $208,040, focused on enhancing graduate education through digital library technology. It has become an international initiative demonstrating the potential for university collaboration and federation. This project aimed to enhance graduate education through a digital library of theses and dissertations. The future aim is for all undergraduate honors theses, master's theses, and doctoral dissertations to be produced in an electronic form and placed in a digital library by the author. This activity should ensure that the next generation of scholars, and society's key leaders, as well as academia, have at least basic "information literacy" that includes knowledge and skills in word processing, electronic publishing, and digital libraries (The Fund for the Improvement of Postsecondary Education, 1996).

Launched as the National Digital Library of Theses and Dissertations at Virginia Tech in September 1996, NDLTD was later renamed as the Networked Digital Library of Theses and Dissertations. The project's digital library provides access to the full text (most in .pdf format) as allowed by the author at a large number of ETDs via the list of university nodes and related sites. Most of the linked sites allow users to both browse and search for theses and dissertations depending on their research needs. Users can also try a working prototype of a federated search engine that performs parallel queries across several dozen-search sites provided by NDLTD

participants in the project. Prior to the end of 2001, over 100 organizations, almost all universities, have officially joined the NDLTD Initiative (NDLTD Team, 2001a). More than one-half of the members are in the United States and the rest are located around the world. This reflects the widespread and ongoing adoption of the goals of the initiative and the change in practice at universities to enhance graduate education (NDLTD Team, 2001a).

The Move to ETDs

Many academic libraries are now in the process of digitizing information in an effort to preserve original works and to make them more widely available for access according to the specifications of their authors. Today, in early 2001, four universities require that theses and dissertations be submitted electronically solely as the student's final transmission after his/her work has been accepted by his committee and submitted to the graduate school office. They are:

West Virginia University http://etd.wvu.edu/templates/browse.cfm

University of North Texas http://library.unt.edu/search/ftlist^bib113,1,0,170

East Tennessee State University

http://etd-review.etsu.edu/ETD-db/ETD-browse/browse?first_letter=all

Virginia Polytechnic Institute and State University

http://scholar.lib.vt.edu/theses/etd-search.html (NDLTD, 2001).

Traditional methods of archiving and storing theses and dissertations in print form are inefficient and unwieldy. Many theses and dissertations lay molding in library basements, with no efficient way for researchers to locate the information that

may be contained in them (Kirschenbaum, 1996b). Further, the time and costs involved in procuring copies of those works may often be prohibitive for students and researchers.

The resources chosen in this paper are for a quick reference and not a completely detailed reference on the topic of ETDs. The subject area of ETDs is multidiscipline and covers subjects such as writing dissertations, programming problems, publication, and other subjects that have allowed the topic of electronic dissertations to grow. Each item's metadata can provide information about the authority, audience, scope, and format of the work. There is an attempt to show chronologically historical under-pining of the growth of a concept that is still developing (The Guide for Electronic Theses and Dissertations, 2001). Today (2001) there are 106 members of the NDLTD. The NDLTD as an organization is located at Virginia Tech. Every day, there are new national and international members joining the organization and building further concepts and developing standards. The success of ETDs and dealing with their problems is important to the building of digital libraries and graduate education (The Council of Graduate Schools, 1991, Coalition for Networked Information, 2000).

Simplified View of the Storage of an ETD for Access

Students write their dissertations or theses, defend their papers, and with the approval of their committee (and relevant graduate faculty), may prepare digital dissertations or theses. This at its simplest is rich text format (rtf.) copied over into .pdf. After the department releases a digital dissertation or thesis, a student submits

the digital copy to the Dissertations Server in the library system using a web form about the work. Access is given via an assigned password that is provided to the student by the graduate school office. The submitted thesis or dissertation is placed in a secured portion of the server that may only be accessed by the author, and, after approval, only by appropriate officials in the Graduate School. If changes are allowed and necessary, the student must resubmit a new amended full copy. The copy, depending on what access has been allowed, is made available on-line by encryption and on the Internet it cannot be altered by anyone outside the Graduate School.

Anatomy of an ETD

There are two main types of ETDs. One type is author created and a submitted work using some electronic tools is submitted in its approved and final electronic form. The raw form of the document is converted into a form that is easy to preserve. It is submitted typically over a network usually with related metadata included such as title, year, author, abstract and any other descriptors. This is the preferred type. The other type of ETD is an electronic file that is created by scanning in the pages of a paper thesis or dissertation. This type is usually a work previously submitted and archived as print form. An example would be an important previous thesis or dissertation for the university or one that a previous graduate has requested to be converted to electronic form for access to provide greater exposure to her/his work.

Figure 1 shows the parts of an ETD. Each part is described.

The Front Part of an ETD contains the following items in the order in which each appears:

Title Page (required): This page contains the name of the university, dissertation or thesis title, author's name, degree written in part for, major, and date of graduation. The page may also show a copyright statement from the author or/and school.

Signatory Page (required): This page lists the names and professorial titles of committee members. The original signatory page (with signatures) must be submitted to the Graduate School Office. The page that appears in the ETD sometimes does not show copies of personal signatures.

An Abstract is required by all ETDs. Abstracts can become part of the bibliographic record in the library's online catalog. Abstracts are always published in Dissertation Abstracts International.

Introduction (optional) is a background presentation for the chosen topic.

A Table of Contents (required) which includes the chapter and section numbers and title along with the page on which each chapter or section begins. In addition, word- processed tables, graphs, and diagrams are listed. Also listed are multimedia objects such as table, graph, diagram, that can be linked to another site. One should list the number and title of the object and the page on which it appears

Acknowledgments (optional) are used to express the author's professional and personal indebtedness. They should be included in the table of contents.

An Epigraph (optional) if used comes at the end of the front part of the ETD and should not be listed in the table of contents.

The Middle Part of an ETD contains the text or body of the work. The body of the work contains chapters or major headings. Further, chapter titles may include: Introduction, Review of Literature, Methodology, Findings, Discussion, Conclusions, and Summary.

The Final Part of an ETD (see figure 1) contains any or all of the following items, in this order:

References or Bibliography (required) appears in alpha/numeric order.

Appendices (optional) are materials that are pertinent to the text but are somewhat tangential or very if detailed may be placed in the appendices. Appendices should appear before the reference section.

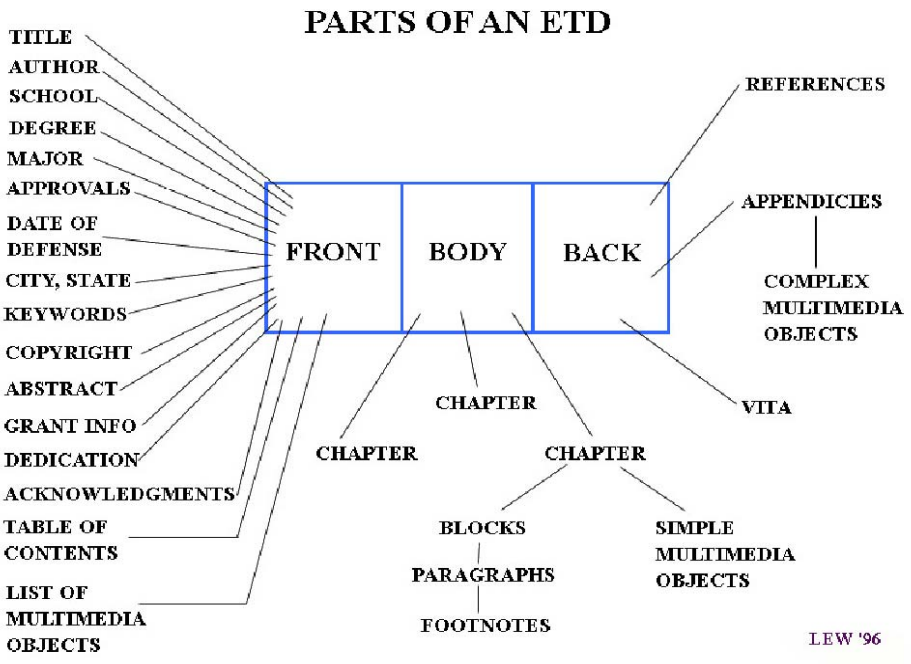

Figure 1. Parts of an ETD. From "Parts of an ETD" by Laura Weiss, 1996b, NDLTD web site. Reprinted with persmission.

Vita (required for doctoral and masters students) is an autobiographical sketch, based on academic and professional experience. The vita should be limited to one page (Pennsylvania State University, 2001).

Figure 2 depicts the "Life Cycle of an ETD."

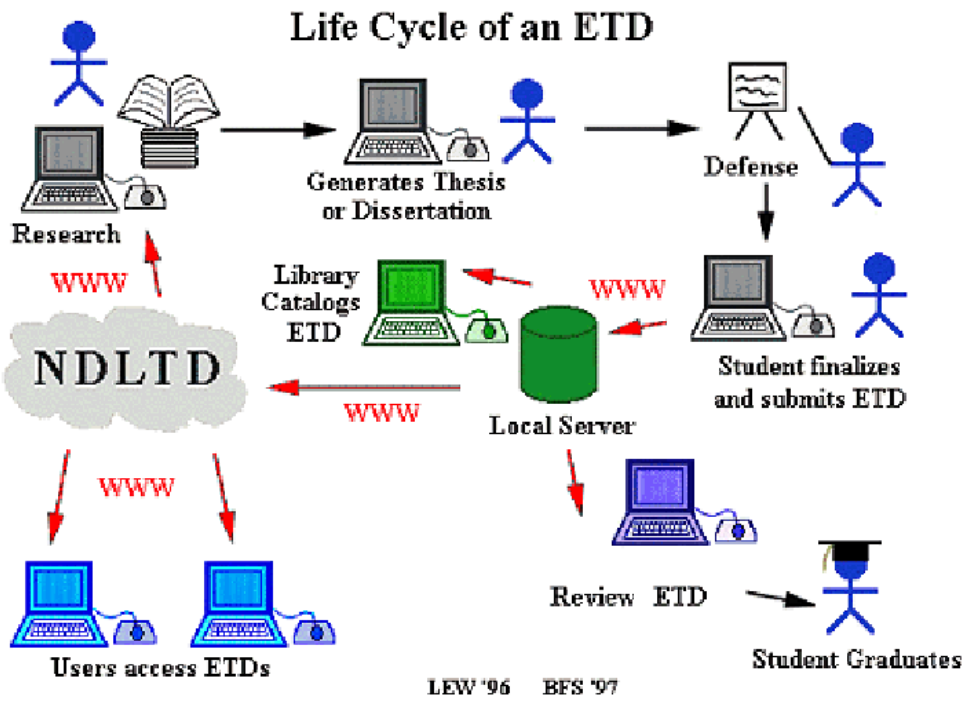

Figure 2. Life Cycle of an ETD. From "Life Cycle of an ETD" originally by Laura Weiss, 1996a, NDLTD web site. Reprinted with persmission.

How could faculty benefit from ETDs?

Each student could develop an electronic portfolio reflecting his or her work and perhaps a collective bibliography. This would encompass all of the faculty member's advisees names. A student's acquired expertise will not completely leave

with that student, but will remain to help "bootstrap" new students (and revive or give new interests or research to faculty members). A wider audience will know the efforts of students working with a faculty member. This would provide publicity and enhanced visibility for the student, student's major professor, and committee members.

Graduate Education

Graduate education in the United States is both decentralized, discipline-specific, and diverse. There is a diversity of missions and agencies participating in higher education and only cooperative efforts will result in positive change. Cooperative efforts also need a shared understanding among institutions. There are, additionally, many participants that include public and private universities and colleges. The stakeholders in higher education are professional societies, state governments, federal government, philanthropic organizations, and accreditation bodies (Steering Committee Recommendations, 1997, p.53-56). According to professional organizations the general mission of colleges and universities in the United States is to prepare the young for economic usefulness, fulfill society's research needs, and provide values and ethics to future adult citizens (Mission Statement, 2001).

Changing Realities

Higher education faculty today is either the product of this educational system or were involved in the system as young practitioners originally as graduate students of educators in the 1960s or 1970s. Much has changed in the twenty or thirty years since current faculty members received their education and early practical experience. In addition to life style changes influencing today's students, changing educational

and career expectations by society as a whole will greatly impact the number and attitude of the next generation of scholars. These future young scholars in their twenties in universities today will retire in 2020! We need to consider this when setting benchmarks for evaluating the level of preparedness of today's scholars. And even more we need to know benchmarks for the attitudes and preparedness of faculty concerning ETDs. Faculty expectations and pedagogy may not have adapted to this "new wrinkle on the horizon" of higher education (Toffler, 1980). Jules B. LaPidus, president of the Council of Graduate Schools stated, "We tend to mark the passage of time in education, for ourselves as well as for our institutions, in terms of significant transitions related to the development of knowledge and skills. Our point of reference almost always is where we have come from rather than where we are going" (LaPidus, 1999).

Paradigm Shift in Higher Education

ETDs represent a paradigm shift in higher education. Webster's New World Dictionary defines a paradigm as "a pattern, example, or model." In social science and education, the term is defined as "a perspective or frame of reference for viewing the social world, consisting of a set of concepts and assumptions" (Bailey, 1982). ETDs represent a paradigm shift because they are a new format (Hooker, 1997) and their presentation can be quite different from the print form in the past. Access to ETDs immediately increases exponentially by users over print theses and dissertations. There is the potential that the prestige of certain universities and departments could change. ETDs could be a hierarchical shake-up to the prestige and elitism of

universities. This is "leveling of the playing field." There is the potential that ETDs will change how committees work together. Paradigm shifts have policy implication of a global learning infrastructure change. They result in new standards and protocols being established as a way of permanency.

Diffusion of Innovation

Literature about educational innovations as permanent change for the most part shows a wide gap between knowledge gained by research and the permanent implementation of that change in the past. Most chronicled are educational innovations from the 1930s to 1964. He showed that a 50-year time lag or at most a 25- year time lag was typical from initial perception of an educational innovation and its final acceptance. Research in educational change has changed exponentially since then (Havelock, 1973; Rich, 1978; Rogers, 1995). In *Diffusion of Innovations*, Everett Rogers (Rogers, 1995) explains that in theory "innovators are the first 2.5 percent of individuals in a system to adopt an innovation." Innovators are "(venturesome) and will undertake risk and occasional setbacks in pursuing a new idea." Electronic dissertations and theses are a new idea about the storage and access of graduate research. They are a "technological innovation." Innovators can become experts (Rogers, 1995). Rogers further explains his definition of technology as a design for instrumental action that reduces the uncertainty in the cause and effect relationship involved in achieving a desired outcome.

The Virginia Tech beta site for ETDs is the design for instrumental action as defined by Rogers. An example would be Edward Fox (Professor, Department of

Computer Science; also director of Digital Library Research Lab), John Eaton (Graduate School, Associate Provost for Graduate Studies), and Gail McMillan (Librarian and Associate Professor; also director, Digital Library and Archives including Scholarly Communications and Special Collections) who are responsible for implementing the FIPSE grant and working to develop a beta site with ETDs at Virginia Tech. They are both innovators and experts.

In addition, Rogers remarks that there are two types of innovations: non-interactive and interactive. A non-interactive innovation is adopted in a sequential manner (Rogers, 1995). The NDLTD (Networked Digital Library of Theses and Dissertations, http://www.ndltd.org/) is an initiative to improve graduate education, increase sharing of knowledge, help universities build their information infrastructure, and extend the value of digital libraries. The NDLTD lists new members as they join at their web site as they become members in a sequential manner. The NDLTD is an organization that is implementing ETDs globally at every collegiate institution. Every added adopter makes the innovation more valuable (Rogers, 1995, p. 93). This was part of FIPSE grant P116-B-61190-96 put into plan in 1996. Rogers continues, "in an interactive innovation there is two way communication between the early adopters and the later adopters" (Rogers, 1995, p. 201). An example would be FIPSE proposed grant April 2001 that establishes such communications. "Each group influences the other one's opinion about the innovation." This interaction also increases the speed of adoption (Rogers, 1995, p. 23). The ETD Conferences held each year are also an example of interactive innovation.

Rogers identifies perceived characteristics of innovation that influence the rate of adoption of an idea. The adoption of innovation leads to permanent change. Rogers lists perceptions of relative advantage, compatibility, complexity, and trialability, observability, channel of communication, channels of mass media, and channels that are interpersonal as needed for the diffusion of innovation. Complexity is defined as the "degree to which an innovation is perceived as relatively difficult to understand and use" (Rogers, 1995, p. 242). Trialability is " the degree to which an innovation may be experimented with on a limited basis" (Rogers, 1995, p. 243). And Observability is an attribute that can be "seen" in the process of being used or tried out by others which increases its probability of being adopted (Rogers, 1995, p. 244).

To avoid confusion the researcher is listing terms as Rogers did in his book. These definitions of terms are interlinking and help one to move through the hierarchical levels that Rogers has designed. Innovation is defined by Rogers "as an idea, practice, or object that is perceived as new by an individual or institution" (Rogers, 1995, p. 11). Diffusion is the kind of social change that defines the process by which an innovation is communicated through channels over time among the members of a social system, the university for example. A Social System is defined as "a set of interrelated units that are engaged in joint problem-solving to accomplish a goal" (Rogers, 1995, p. 23).

Communication then is the process in which participants create and share information one from the other (Rogers, 1995, p. 18). An example of an innovation used in teaching and research is the Internet. Another example would be ETDs at

Virginia Tech or digital libraries that appear also on the Internet. And lastly, the advantages of the innovation and the rate of communication lend themselves to how fast the innovation is adopted. Time refers to the rate or speed of adoption by users. It is represented numerically as "the steepness of the curve" (Rogers, 1995, p. 206). The curve that manifested itself in almost all diffusion studies by Rogers is the S-shaped or signoidal-distribution curve (Rogers, 1995).

In innovation diffusion problems slow down the rate of acceptance or even hinder the acceptance. Enter bureaucracy and the "group think" problems in higher education that slows down adoption of the innovation. Then there is the problem of re-invention, which is the degree to which an innovation is changed or modified by a user in the process of its implementation. Further, it is the degree to which an individual's use of an idea departs from the mainline version by the change agency (Rogers, 1995). Re-invention will be what each department or grouping of departments decides to do as shown in this survey.

Rogers' definition of diffusion of innovation process also names the attributes of innovations that have similarly been conceptualized as generic constructs that cross all discipline lines. Rogers (1995) named and described the generic attributes as either Relative advantage "the degree to which an innovation is perceived as being better than a competing or preceding idea" (Rogers, 1995, p. 212) or Compatibility is the "degree to which an innovation is perceived as consistent with existing values, past experiences, and needs of the potential adopters" (Rogers, 1995, p. 224). He further stated "change agents should begin their efforts with a particular audience with an

innovation that has a high degree of relative advantage, so that they can build successively on this initial success" (Rogers, 1995, p 228). This is true of ETDs and NDLTD members in general for an example. Everett Rogers calls "needs" compatibility as a construct as the matching up of the innovation with the perceived needs of the potential adopters (Rogers, 1995). In this situation, a research extensive university located in the southern part of the United States.

Needs Assessment

There was great interest in needs assessment between 1965 and 1975 by scholars in academia. This field has had its greatest growth since 1975. In order to learn how to conduct a needs assessment, it is necessary to see what the methods are and how they fit into educational planning. Almost all the sources in the literature dealing with needs assessment make an attempt to define the term. The terminology of needs assessment can be various for "assessors" (Csete, 1996). Csete used synonyms for needs assessment such as needs analysis, goal analysis, task analysis, and front-end analysis (Csete, 1996, p. 2). Kaufman, (1985), stated "needs assessments involve identifying and justifying gaps in results, and placing the gaps in prioritized order for attention" (Kaufman, 1985, p. 21). The difference between needs assessment and needs analysis is that needs assessment "provides a fine determination of where a need is coming from, and provides clues to how the need may be reduced or eliminated" (Kaufman, 1985, p. 21).

Previously, there were definitions that define needs assessment as being part of an overall planning process or analysis and leading to the development of a deficiency

model. There are decision-based definitions that define needs assessment by what it does (this is a rare find). These definitions then lead to discrepancy models (Sweigert, 1969). For example, Sweigert explains that "an assessment of needs is a process by which information is made available to decision-makers at the time they need it to make decisions." Another of the same type of model is the Coffing-Hutchinson Needs Analysis Methodology (R. T. & T. E. Hutchinson, 1974). "A need is a concept of some desired set of conditions. A need is a concept of what should be." The most common of the definitions in the literature is the one that emphasizes the discrepancy between two sets of factors (Heinkel, 1973). Heinkel understands needs as the "gaps between current outcomes and achievements and desired outcomes and achievements for learners, implementers, and the community." The term "needs assessment" is used to designate a process for identifying and measuring gaps between what is and what ought to be and then prioritizing the gaps and determining which of the gaps to work on to obtain closure (Trimby, 1979). To summarize, there are models that are goals, planning based-deficiency models, decision-based discrepancy models, and discrepancy based models (most used). Here, needs assessment is defined as "any systematic approach to setting priorities for future action" (Witkin, 1984, p. ix).

In adult education, needs are defined as a gap between a current situation/s that can be described (PSA) and a situation/s in the future that we can describe and which is considered more desirable (FSA). Further, there can be prescriptive needs or motivational needs. One must also consider who is the owner of the need or the relevance of the need, for example the employer/employee or university/student

(Regan & Dalton, 1998). To form a model of needs assessment, there are models that are participatory form (where target groups defined their own need), expert form (needs defined by outside experts), and combination form (target group and outside experts define their needs). Interviews, questionnaires (qualitative), and surveys (quantitative) are models of instrumentation (Dalton, 1996). The best model for this paper as frame work for decision making is *Model for Needs Assessment* by Cote J. Dalton (Dalton, 1996). (See Appendix K). Dalton has taught this model and applied it numerous times in Canada while teaching for universities and serving in the military.

Faculty development needs assessment in the literature, unfortunately, is typically funded at less than one percent of the general budget at most schools. In short, there is a difference between what effective faculty development is perceived to be and what is the actual situation. There is little hard data pertaining to faculty development needs assessments and none available for the development of a needs assessment for faculty and ETDs. Needs Assessment is now a part of educational planning and is being used increasingly for in service training and faculty development (ERIC, 2001).

Hadley and Sheingold (1993) asked how do teachers actually learn to use new technologies. They found in descending order that they learned by: self-study; conferences and workshops on their own time; taking courses at local colleges; courses offered by their district (in-service); taking courses offered at their school site (in-service); courses in graduate or undergraduate college and university training;

courses offered by the district (not in-service); instruction from other teachers; and instruction on site by consultants. They further were asked what do teachers perceive as ways that technology might meet their personal interests or needs. They told the surveyors that they perceived that technology meet their personal interests or needs by expanding students' learning, experience, capacities, and productivity; helping teachers teach more effectively; increasing interest in, applying, and reinforcing subject matter; and motivating learning through fun, relevance, reinforcement, and success (Hadley & Sheingold, 1993). These perceptions are powerful motivators for teachers to want to learn more. Further, it is important to structure any training to meet faculty personal interests or needs as teachers. Teachers may start using technology partly because it is partially expected of them by administrators, but faculty will continue developing their skills only because they wish to or perceive advantages to doing so (Becker, 1992).

This study, with its survey, provides benchmarks not presented before as well as a starting place for providing what this school's faculty needs are as a result of this needs assessment by survey and for the successful implementation of ETDs at a United States research extensive university located in the southern United States.

Summary

ETDs are now required at Virginia Tech (beta site), East Tennessee State, North Texas State, and West Virginia University. Numerous colleges and universities make the submission of ETDs optional, while others are at the pilot investigative stage. The Networked Digital Library of Theses and Dissertations (NDLTD), formed

in 1997 at Virginia Tech, has, at present, 106 members: 90 member universities (including 3 consortia) and 12 institutions (business, government, or museum). As a part of the FIPSE Grant, Virginia Tech, has held several workshops, and as a beta site provided research universities with examples, programming, expert support, and the right to adapt Virginia Tech's methods directly in setting up their own site. Good research extensive colleges/universities are members of NDLTD and an Internet 2 University Member. If one is a graduate student doing research and research applications of their studies at a large, land-grant, and Carnegie Research Extensive 1 University, they are writing a thesis or dissertation. Further, in the new model of electronic thesis and dissertations, if technological expertise and competency are required of future PhD graduates, then electronic publishing in all sectors will be part of that competency (Fox, 1996).

One purpose of this study is to set benchmarks for comparison, as this paradigm is being implemented, to correct myths and misconceptions. To study, further the implications of this study. This dissertation concerns the next generation of scholars who are immersed in the information age and their mentoring faculty, whose roots are grounded mostly in the industrial age and who may or may not be computer efficient. Computers have been used in the past as a tool to author theses and dissertations in universities. Today, the same updated authoring computer programs are being used but in the near future computer software and hardware will be used to create, transfer, provide approval for, and allow storage for access electronically to ETDs. New technologies are enabling multimedia to be part of ETDs.

Many evaluation criteria are clustered around shifts in form and content allowed by new technologies. Graduate research will be richer in dimension, multi-threaded, and above all richer in communications for the originator and consumer of research. The new technologies will enhance the university information infrastructure through providing access to research sooner via the Internet, marketing of programs by example, and sharing to a world that is historically and socially making the world smaller everyday. Research presently is showing that the consumer is becoming savvier in using the Internet not only as a source of receiving information but s/he also is showing a desire to interact with that information. ETDs will help one's research efforts in finding jobs and funding or make their research activities more efficiently accessible.

CHAPTER 3

METHODOLOGY

Population and Sample

The target population for this study was graduate advisors in higher education. The accessible population was defined as graduate advisors at a research extensive university located in the southern portion of the United States who are currently advising one or more students in the thesis or dissertation phase of their graduate career. The sample consisted of all graduate faculty members at said research extensive university located in the southern portion of the United States who were identified as the instructor of record for thesis or dissertation credit (8000 or 9000 courses) on 8 September 2001. Since all faculty in the accessible population meeting the criteria were included in the drawn sample, the study was most accurately classified as a census study. A total of 581 faculty members were identified as having met these criteria at the participating institution. The total population of graduate faculty during the fall 2001 academic year when the data was collected was 1,094 (personal communication, Office of the Registrar, Louisiana State University).

The next strategy was to establish the identity of faculty no longer actively employed by the university at the time that the survey was taken. This number (12) reduced the total of faculty identified to 569. Another four faculty who were on sabbatical, ill, out of the country or otherwise absent from the university and not available to be surveyed were excluded. The total number of eligible faculty identified for this survey was 565 at the completion of the survey cycle.

Cochran's sample size determination formula was used to determine the minimum required sample size for this study. This sample size had an a' priori alpha level of .05, established risk that the actual margin of error exceeds the acceptable margin of error. An acceptable margin of error was set at 5%, and the estimate of the variance in the population was set at .25 (the most conservative estimate of variance - calculated as p times q, where p = the proportion of the population in one specific category of the variable and q = the proportion not in that category). Calculations included:

$$N_0 = \frac{(t)^2 * (s)^2}{(d)^2}$$

$$\frac{(1.98)^2(.75)^2}{(.10)^2}$$

$$\frac{(3.9204)(.5625)}{.01}$$

$$\frac{2.205}{.01} = 221$$

$$\frac{221}{1+\frac{221}{1094}}$$

$$\frac{221}{1.202} = 184$$

A minimum of 184 useable responses was used to maintain the margin of error of the estimate established by the researcher. Cochran's (1977) small population correction formula was used to calculate the final sample size.

Instrumentation and Data Collection

Instrumentation

The instrument used in this study consisted of four parts. Each part is described in the following sections along with the establishment of content validity.

a. The researcher adapted the first part of the instrument, Part 1a, Perceptions About New Technologies, from a survey used by the administration of Ricks College, Idaho (now BYU, Idaho) to assess the needs of its faculty in implementing technological innovations using computers. Rick's instrument (survey) was validated by the school's panel of representative faculty and had been used previously. Part 1b, General Perceptions About ETDs, is researcher created and is being used to measure general perceptions of the faculty on a five point scale of strongly disagree to strongly agree. Part 1b was validated by a panel of experts composed of 10-peer faculty members not included in survey.

b. Questions for Parts two and three of the instrument - Part 2, ETDs as Scholarly Format and Part 3, Publishing – were taken from other Internet available sites and published research surveys (Virginia Tech validated surveys, major concerns or frequently asked questions about ETDs at Virginia Tech, University of Pennsylvania, and West Virginia University). Additionally, questions were derived from questions asked at the Work Shop for ETDs at Virginia Tech, May 1999 that the researcher attended and also from the Third International Symposium on Electronic Theses and

Dissertations, March 2000 that the researcher attended. A panel of 10-peers who were not included in the survey validated the survey's Part 2 and Part 3.

c. Part 4, Demographic Information, was composed by the researcher and includes items designed to describe faculty at a research extensive university on selected personal and professional demographic characteristics including the following: age; gender; ethnic group; highest level of education completed; academic rank; earned tenure at LSU; college, department and discipline; administrative appointment concurrent with faculty appointment and what they are; number of master students committee chair for at present; number of doctoral students committee chair for at present; time spent in an average school semester week doing teaching, research; administration, and service; number of credit hours they are teaching this semester; number of courses teaching this semester; official university assignment hours; percentages for teaching, research, administration, and service; average number of hours worked in a typical week as chair for a masters or doctoral student, and total number of years in their career as committee chair for a masters or doctoral students.

The researcher developed and pilot tested the instrument, which was validated by a panel of experts who chair theses and dissertations and were chosen from faculty (10) who were not active during the fall 2001 academic year. The pilot test was used to help validate the readability of the instrument and to determine the response time in

completing this instrument. The instrument was revised based on the suggestions provided by the panel of experts.

This survey consisted of a number of statements referring to questions about ETDs, technology, and perceptions of the faculty on a number of subjects. The 4-part survey is attached as Appendix D. The respondents were not provided any explanation or interpretation of the terms in the survey. In case of ambiguity, they were asked to use their own interpretation.

The instrument was utilized in data collection for the study. Prior to administering the instrument, the purpose of the study was explained to the participants in a cover letter. After necessary adjustments were made to the instrument, it was given out with the university's approval. Dillman's (1978) total design method was used in conducting this survey. The survey was sent to faculty who were identified for this study through inter campus mail for immediate response. The surveys were pre-coded to allow follow-up. Identifying the participant for the survey was for follow-up purposes only and will not be used for identification in any other way. Data collection lasted five weeks: Monday through Friday with follow up on the next Monday, two weeks after the initial mailing.

The mailing consisted of a 6x9 manila envelope containing a seven page double sided survey; a letter explaining the survey, why they were picked to answer the survey and the importance of the survey as research; and a letter size first class postage paid addressed envelope in which the respondents could return their survey to

the researcher. Each survey contained an identification number so that later the researcher could determine if the survey had reached the identified faculty.

The identified non-respondent faculty were mailed a new copy of the survey, follow-up letter on February 11, 2002 and were e-mailed at his or her university address a notice that the survey and follow-up letter had been mailed. If there still was no response, a third attempt was made to contact the respondent on 13 February, 2002 by phone. Randomly selected non-respondents were called in the order SAS had ordered them for non-respondents for 30 faculty members.

As each survey was returned, the researcher checked off the name of the faculty respondent on a list of faculty identified as being part of this survey. The researcher coded the information for entry into the statistical package. The data analysis was done using Statistical Package for Social Science (SPSS). A log was set up and maintained to identify the surveys received and date received by the researcher. These were circled and coded in color. Two sub logs were set up and maintained weekly that identified received and not received surveys by identification number, faculty name, and department.

A list of comments to the survey that were other than a Likert scale was compiled. The respondents were allowed to write general comments as question 19 in part four or any where on the survey they wanted to. These comments to the questions were all duly noted. A total of 289 surveys were collected in a five-week period.

E-mailed notices resulted in the following reasons given by faculty for not having mailed their survey in good time in returned mail: (1) “Yeah, dug it out and

mailed it today", (2) "Don't answer surveys or don't believe in surveys," (3) "I never open my mail all at once or I get to my mail when I can," (4) "Lost it would you please send another one," (5) "Nothing will change because of it (the survey) due to the administration's past history," (6) "Too easy to identify who I am," (7) "I have not had a student finish using the new methods yet so it is difficult to evaluate the electronic submissions," (8) "Sorry but I generally receive a survey a week and have no time to reply to even a fraction," (9) "I am on sabbatical this semester, and am not currently in Baton Rouge. I may be returning there for a few days next week. I'll try to look over the mail and respond to your survey" and (10) "I just cleaned off my entire desk and found it."

Ethical Considerations

This research involves human subjects; therefore it was necessary to ensure that ethical principles will be applied. An Application For Exemption was applied for from the Louisiana State University Institutional Review Board (IRB) and received.

Data Analysis

Statistical analysis was conducted to determine whether there are differences in perceptions on the part of faculty concerning using new electronic storage and access methods in the form of ETDs for doctoral and masters students in a research extensive university. Statistical tests were conducted in reference to satisfying the following objectives:

Objectives

1. To determine attitudes toward using new technologies in their teaching and research by faculty members in a research extensive university. This is measured using the mean and standard deviation of each item in the scale. Factor analysis was used to determine if underlying constructs existed in the data.

2. To determine attitudes of graduate faculty in a research extensive university toward ETDs. This is measured using the mean and standard deviation of each item in the scale. Factor analysis was used to determine if underlying constructs existed in the data.

3. To determine familiarity with and knowledge of ETDs by the graduate faculty members in a research extensive university. This is measured using the mean and standard deviation of each item in the scale. Factor analysis was used to determine if underlying constructs existed in the data.

4. To determine the self-perceived level of expertise in using software technology associated with ETDs of graduate faculty members in a research extensive university. This is measured using the mean and standard deviation of each item in the scale. Factor analysis was used to determine if underlying constructs existed in the data.

5. To determine the options that students producing ETDs should have for granting access to their ETDs as perceived by graduate faculty members in a research extensive university. This measures whether or not they would use the strategy/technique provided for each of the items listed. The scale was summarized by

reporting the number and percentage of faculty using each of the strategies and the total number of strategies used by each of the participating faculty.

6. To determine whether or not selected delivery methods should be used to educate graduate students about ETDs as perceived by graduate faculty in a research extensive university. This measures whether or not they would use the strategy/technique provided for each of the items listed. The scale was summarized by reporting the number and percentage of faculty using each of the strategies and the total number of strategies used by each of the participating faculty.

7. To determine whether or not faculty training is needed in the use of software as perceived by graduate faculty in a research extensive university. This is measured using the mean and standard deviation of each item in the scale. Factor analysis was used to determine if underlying constructs existed in the data.

8. To determine the self-perceived psychological reactions to ETD's as a concept among graduate faculty members in a research extensive university. This is measured using the mean and standard deviation of each item in the scale. Factor analysis was used to determine if underlying constructs existed in the data.

9. To describe graduate faculty members in a research extensive university on selected aspects of their scholarly productivity. This is measured using the mean and standard deviation of each item in the scale. Factor analysis was used to determine if underlying constructs existed in the data.

10. To describe faculty in a research extensive university on selected personal and professional demographic characteristics including the following: Age; Gender;

Ethnic group; Highest level of education completed; Academic rank; Earned tenure at LSU; College, department and discipline; Administrative appointment concurrent with faculty appointment; Number of master students committee chair for at present; Number of doctoral students committee chair for at present; Time spent in an average school semester week doing teaching, research, administration, and service; Number of credit hours they are teaching this semester; Number of courses teaching this semester; Official university assignment hours percentages for teaching, research, administration, and service; Average number of hours worked in a typical week as chair for a masters or doctoral student semester; and Total number of years in their career as committee chair for a masters or doctoral students.

11. To determine if significant relationships exist between perceptions regarding ETD's among active graduate faculty in a research extensive university and each of the following personal and professional demographic characteristics: Age; Gender; Academic Rank; Earned Tenure; Number of master students committee chair for at present; Number of doctoral students committee chair for at present; Time spent in an average school semester week doing teaching and Years served as graduate advisor for masters and/or doctoral students years.

CHAPTER 4

FINDINGS

Results of the study are presented in this chapter organized by the objectives of the study. Descriptive and inferential statistics were used to analyze the data using SPSS, a statistical program.

Attitudes and Perceptions

Attitudes Toward Using New Technologies

The first objective of the study was to determine attitudes toward using new technologies in teaching and research by faculty members in a research extensive university. Information to accomplish this objective was derived from responses to the "Perceptions About New Technologies" scale developed by Ricks College (Ricks College, 2000). The mean and standard deviation of the responses to each item in the scale were computed and presented in this section (see Table 1). Factor analysis was used to determine if underlying constructs existed in the data.

To facilitate interpretation of the responses to this scale, the researcher established a scale of substantive interpretation. This scale included the following interpretations for the various mean responses: a mean response value of 1.50 or less was considered to be Strongly Disagree; 1.51 to 2.50 was considered to be Disagree; a mean response value of 2.51 to 3.49 was considered to be Not Sure; a mean response value of 3.50 to 4.49 was considered to be Agree; and a mean response value of 4.50 or more was considered to be Strongly Agree.

The items from the "Perceptions About New Technologies" Scale with which the respondents most agreed included, "I am comfortable in using new technology"

Table 1

Perceptions of Active Graduate Faculty in a Research Extensive University Regarding New Technology

Perception Item	M	SD	Response Category [a]
I am comfortable in using new technology?	3.85	.94	Agree
In general, I like to work with new technologies?	3.81	.98	Agree
Do you consider yourself an "early adopter" of new technology?	3.48	1.17	Agree
I have adequate technological resources now?	3.22	1.04	Not Sure
Support and help with new technology is readily available when I need it?	2.99	1.12	Not Sure
New technologies make little difference in the way people learn and think?	2.52	1.12	Disagree
New technology will not improve learning?	2.40	1.13	Disagree
I am reluctant to adopt new technology because I do not know enough about using them?	2.33	1.10	Disagree

(table continued)

Perception Item	M	SD	Response Category [a]
The new technologies interfere with teaching and learning?	2.12	.91	Disagree
I prefer not to use new technology because it is too complicated?	1.91	.92	Disagree

Note. Response scale descriptors included: 1=strongly disagree, 2=disagree, 3=not sure, 4=agree, and 5=strongly agree

[a] Response Category Values: Strongly disagree = 1.50 or less; disagree = 1.51 to 2.50; not sure = 2.51 to 3.49; agree = 3.50 to 4.49; and strongly agree = 4.50 or more

(M = 3.85, SD = .94) and "In general, I like to work with new technologies" (M = 3.81, SD = .98). Both of these items were classified in the "Agree" category using the researcher established interpretive scale. The items with which respondents most strongly disagreed included: "I prefer not to use new technology because it is too complicated" (M = 1.91, SD = .92) and "The new technologies interfere with teaching and learning" (M = 2.12, SD = .91). These items were classified in the "Disagree" category. Overall, respondents "Agreed" with three of the ten items on the scale; they were "Not Sure" regarding two of the scale items; and they "Disagreed" with five of the items.

To further summarize the information derived from this scale, the researcher factor analyzed the items in this scale to determine if underlying constructs could be found in the data. The first step in conducting a factor analysis is to determine the appropriate number of factors to be extracted from the scale. Using a combination of

the latent root criteria and the scree plot test criterion, the number of factors to be extracted was determined to be two. The results of the factor analysis, including the factor, its label as determined by the content of the items included in the factor, the percentage of variance explained by each factor, and factor loadings for each item in each of the factors is presented in Table 2. The researcher labeled the two sub-

Table 2

Factor Analysis of Responses to the Perceptions of New Technologies Scale by Active Graduate Faculty Members at a Research Extensive University

Subscale - Personal Issues	**Factor 1**	Factor 2
(35.92% of variance explained)		
I consider myself an "early adopter"of new technology.	**.82**	.009
In general, I like to work with new technologies.	**.80**	-.15
I am comfortable in using new technology.	**.79**	-.09
I am reluctant to adopt new technology because I do not know enough about using them.	**-.76**	.09
I prefer not to use new technology because it is too complicated.	**-.76**	.16
Subscale – Institutional Issues	Factor 1	**Factor 2**
(15.59% of variance explained)		
New technology will not improve learning.	-.22	**.69**

(table continued)

Subscale – Institutional Issues	**Factor 1**	Factor 2
Support and help with new technology is readily available when I need it.	-.067	**-.67**
The new technologies interfere with teaching and learning.	-.24	**-.61**
New technologies make little difference in the way people learn and think.	-.25	**.57**
I have adequate technological resources now.	.068	**-.45**

scales – " Personal Issues" and "Institutional Issues." The first factor identified in the scale related to "Personal Issues" as perceived by the faculty member. Items in this factor include "I consider myself an "early adopter" of new technology," "In general, I like to work with new technologies" and "I am comfortable in using new technology." The factor loadings ranged from a high of .82 to a low of -.76 and explained 35.92 % of the overall variance in the scale.

The second factor identified in the scale related to "Institutional Issues" as perceived by the faculty member. Items in this factor include "New technology will not improve learning," "Support and help with new technology is readily available when I need it" and "The new technologies interfere with teaching." The factor loadings ranged from a high of .69 to a low of -.45 and explained 15.59% of the overall variance in the scale.

After the sub-scales were identified, a sub-scale score was calculated for each of the identified scales. These scores were defined as the mean of the items included in each of the respective scales. However, since some of the items in the "Perceptions of New Technologies" scale were designed as reverse coded items, it was necessary to recode the items prior to calculation of the sub-scale scores so that for all items in the scale, positive attitudes toward the use of new technologies were represented consistently by the data. The recoding was completed so that for all items the higher response value represented a more positive attitude toward the use of new technology. Following this procedure, a mean score was computed for each of the sub-scales identified in the factor analysis. Since, part of the items were recoded, the sub-scale scores no longer reflect simply agreement or disagreement with the items in the sub-scale (See Table 3).

Table 3

Attitudes Toward New Technologies Sub-Scale Scores of Active Graduate Faculty at a Research Extensive University

Scale	Items	Means	SD	Min - Max
Personal Issues as Perceived by Active Graduate Faculty at a Research Extensive University in Regards to New Technology	5	3.78	.82	1.0 – 5.0
Institutional Issues as Perceived by Active Graduate Faculty at a Research Extensive University in Regards to New Technology	5	3.43	.65	1.6 – 4.8

Note. All items were recoded so that higher response values reflect more positive attitudes.

The individual sub-scale subject mean scores for the "Personal Issues" scale ranged from a low of 1.0 (the lowest possible score) to a high of 5.0 (the highest possible score) with an overall mean of 3.78 (SD = 0.82). For the "Institutional Issues" sub-scale, the individual subject scores ranged from a low of 1.60 to a high of 4.80 with an overall mean of 3.43 (SD = 0.65)

Attitudes of Active Graduate Faculty Toward ETDs

The second objective of the study was to determine attitudes of graduate faculty in a research extensive university toward ETDs. Information to accomplish this objective was derived from responses to the "General Perceptions About ETD's" scale which was a researcher designed scale (See Table 4). The mean and standard

Table 4

Perceptions of Active Graduate Faculty in a Research Extensive University Regarding ETDs

Perception Item	M	SD	Response Category [a]
ETDs will increase the access of faculty and graduate students to important research literature.	3.87	1.04	Agree
The advantages of ETDs outweigh their disadvantages.	3.61	1.00	Agree
This university is ready for ETDs.	3.24	1.03	Not Sure

(table continued)

Perception Item	M	SD	Response Category[a]
Intellectual property rights will be a significant problem in electronic submission of theses/dissertations.	2.87	1.08	Not Sure
Graduate students will need extensive training to submit their thesis/dissertation electronically.	2.54	1.02	Not Sure
I have apprehensions about requiring electronic submission of theses and dissertations.	2.52	1.21	Not Sure
Faculty graduate advising loads should be reduced to accommodate the increased time requirements associated with ETDs.	2.43	.95	Disagree
Adoption of ETDs for submission of Theses and Dissertations will benefit my career.	2.39	.96	Disagree
The university will improve the ability to recruit top quality graduate students by requiring electronic submission of theses and dissertations.	2.38	1.04	Disagree

(table continued)

Perception Item	M	SD	Response Category [a]
Access to computer hardware will be a significant problem for graduate student in electronically submission of theses and dissertations.	2.33	1.09	Disagree
ETDs will interfere with my ability to effectively advise my graduate students.	1.89	.88	Disagree
ETDs are just a passing fad.	1.87	.88	Disagree
Many currently enrolled graduate students will drop out due to the ETD requirements.	1.63	.79	Disagree

Note. Response scale descriptors included: 1=strongly disagree, 2=disagree, 3=not sure, 4=agree, and 5=strongly agree

[a] Response Category Values: Strongly disagree = 1.50 or less; disagree = 1.51 to 2.50; not sure = 2.51 to 3.49; agree = 3.50 to 4.49; and strongly agree = 4.50 or more.

deviation of the responses to each item in the scale were computed and presented in this section. Factor analysis was used to determine if underlying constructs existed in the data.

To facilitate interpretation of the responses to this scale, the researcher established a scale of substantive interpretation. This scale included the following interpretations for the various mean responses: 1.50 or less = Strongly Disagree; 1.50 to 2.50 = Disagree; 2.51 to 3.49 = Not Sure; 3.50 to 4.49 = Agree; and 4.50 = Strongly Agree.

The items from the "General Perceptions About ETDs" Scale with which the respondents most agreed included, "ETDs will increase the access of faculty and graduate students to important research literature" ($\underline{M}$ = 3.87, $\underline{SD}$ = 1.04) and "The advantages of ETDs outweigh their disadvantages" ($\underline{M}$ = 3.61, $\underline{SD}$ = 1.00). Both of these items were classified in the "Agree" category using the researcher designed interpretive scale. The items with which respondents most strongly disagreed included: "ETDs are just a passing fad" ($\underline{M}$ = 1.87, $\underline{SD}$ = .88) and "Many currently enrolled graduate students will drop out due to the ETD requirements" ($\underline{M}$ = 1.63, $\underline{SD}$ = .79). These items were classified in the "Disagree" category. Overall, respondents "Agreed" with two of the thirteen items on the scale; they were "Not Sure" regarding four of the scale items; and they "Disagreed" with seven of the items.

To further summarize the information derived from this scale and to avoid the inflation of experiment-wise error associated with using each of the items from the scale separately in subsequent analyses, the researcher factor analyzed the items in this scale to determine if underlying constructs could be found in the data. The first step in conducting a factor analysis is to determine the appropriate number of factors to be extracted from the scale. Using a combination of the Latent Root Criteria and the Scree Plot test criterion, the number of factors to be extracted was determined to be two. The results of the factor analysis, including the factor, its label as determined by the content of the items included in the factor, the percentage of variance explained by each factor, and factor loadings for each item in each of the factors is presented in Table 5. The researcher labeled the two sub-scales: " Problems Associated with

ETDs" and "Advantages of ETDs." The first factor identified in the scale relates to "Problems Associated with ETDs." Items included in this sub-scale related to the faculty members' perceptions regarding potential problems associated with ETDs. Items in this factor include "ETDs will interfere with my ability to effectively advise my graduate students," " Graduate students will need extensive training to submit their thesis/dissertation electronically", and "Many currently enrolled graduate students will drop out due to the ETD requirements." The factor loadings ranged from a high of .74 to a low of .51 and explained 33.46% of the overall variance in the scale.

Table 5

Factor Analysis of Responses to the General Perceptions About ETDs Scale by Active Graduate Faculty Members at a Research Extensive University

Subscale – Problems Associated with ETDs	**Factor 1**	Factor 2
(33.46% of variance explained)		
ETDs will interfere with my ability to effectively advise my graduate students.	**.74**	-.19
Graduate students will need extensive training to submit their thesis/dissertation electronically.	**.67**	-.02
Many currently enrolled graduate students will drop out due to the ETD requirements.	**.66**	.04
ETDs are just a passing fad.	**.65**	-.24
I have apprehensions about requiring electronic submission of theses and dissertations.	**.64**	-.29

(table continued)

Subscale – Problems Associated with ETDs	**Factor 1**	Factor 2
Access to computer hardware will be a significant problem for graduate student in electronically submission of theses and dissertations.	**.64**	-.13
Faculty graduate advising loads should be reduced to accommodate the increased time requirements associated with ETDs.	**.56**	.19
Intellectual property rights will be a significant problem in electronic submission of theses/dissertations.	**.51**	-.21
Subscale – Advantages of ETDs	Factor 1	**Factor 2**
(14.29% of variance explained)		
The university will improve the ability to recruit top quality graduate students by requiring electronic submission of theses and dissertations.	.17	**.75**
Adoption of ETDs for submission of Theses and Dissertations will benefit my career.	-.04	**.73**
This university is ready for ETDs.	-.17	**.69**
ETDs will increase the access of faculty and graduate students to important research literature.	-.48	**.66**
The advantages of ETDs outweigh their disadvantages.	-.41	**.46**

The second factor identified in the scale related to "Advantages of ETDs." Items included in this sub-scale related to the faculty members perceptions relative to potential "Advantages of ETDs." Items in this factor included "The university will improve its ability to recruit top quality graduate students by requiring electronic submission of theses and dissertations," "Adoption of ETDs for submission of Theses and Dissertations will benefit my career," and "This university is ready for ETDs." The factor loadings ranged from a low of .46 to a high of .75 and explained 14.29% of the overall variance in the scale (See Table 5).

After the sub-scales were identified, a sub-scale score was calculated for each of the identified scales. These scores were defined as the mean of the items included in each of the respective scales. However, since some of the items in the "General Perceptions of ETDs" scale were designed as reverse coded items, it was necessary to recode the items prior to calculation of the sub-scale scores so that for all items positive attitudes toward the use of ETDs were represented consistently by the data.

The recoding was completed so that for all items the higher response value represented a more positive attitude toward the use of ETDs. Following this procedure, a mean score was computed for each of the sub-scales identified in the factor analysis. Since part of the items were recoded, the sub-scale scores no longer reflect simply agreement or disagreement with the items in the sub-scale.

The individual subject scores for the "Disadvantages Associated with ETDs" sub-scale ranged from a low of 1.88 to a high of 5.0 with an overall mean of 3.73 (SD = .63). For the second sub-scale "Advantages of ETDs," the individual subject means

ranged from a low of 1.2 to a high of 5.0. The overall mean score for the group was 3.11 (SD = .68) (See Table 6).

Table 6

Overall Perceptions of Active Graduate Faculty at a Research Extensive University Regarding ETDs

Sub-Scale	Items	Means[a]	SD	Min - Max
Disadvantages Associated with ETDs	8	3.73	.63	1.88 – 5.0
Advantages of ETDs	5	3.11	.68	1.2 – 5.0

Note. All items were recoded so that higher response values reflect more positive attitudes toward ETDs.
[a] Response scale values ranged from 1 to 5.

Familiarity With and Utilization of ETDs as Scholarly Format

The third objective of the study was to determine familiarity with and knowledge of ETDs by active graduate faculty members in a research extensive university. This objective was accomplished through the use of faculty responses to a series of items designed to identify their knowledge of and utilization of ETDs. Most of these items called for a categorical response of "Yes" or "No." The first item and the one which received the largest percentages of "Yes" responses was "Have you used the Internet in the last six months to search online databases in your field (Examples Medline, ERIC, PsycINFO)" More than 90% (n = 260, 90.3%) of the 288 individuals who responded to this item indicated "Yes." (See Table 7) This item was used in the study as precursory to the issues of ETDs since access to ETDs is achieved primarily through the Internet. Study participants were then asked "Have you ever

Table 7

Familiarity with ETDs Among Active Graduate Faculty in a Research Extensive University

Item	Response	Frequency	%
Have you used the Internet in the last six months to search online databases in your field (Examples Medline, ERIC, PsycINFO)?	Yes	260	90.3
	No	28	9.7
Have you ever seen an ETD?	Yes	58	20.3
	No	228	79.7

seen an ETD?" Most of the respondents (286 of the 289 total participants) answered this item, and slightly more than one fifth (n = 58, 20.3 %) indicated "Yes" that they had seen an ETD.

The 58 faculty members who indicated that they had seen an ETD were asked "Approximately how many ETDs have you consulted in the last month?" Thirty-two of the participants provided useable data in response to this question. These responses ranged from a low of one ETD consulted in the last month to a high of six ETDs consulted in the last month. The overall average number of ETDs consulted was 1.52 (SD = 1.12). In addition, when the 58 eligible respondents were asked "Have you ever downloaded an ETD?" 49 answered the question, of which 24 (49%) said "Yes" and 25 (51%) said "No."

Fifty of the 58 respondents who indicated that they had seen an ETD provided useable data in response to the question "Have you ever used the reference section of

an ETD?" The majority (n = 29, 58 %) answered "No" to this question, while 21 (42 %) responded "Yes." Finally, these same 58 participants were asked "Have you ever searched any of the ETD libraries?" Almost three-fourths (n = 37, 74%) of the 50 subjects who answered the question responded "No," and 13 (26 %) indicated "Yes" that they had searched an ETD library.

Self-Perceived Level of Expertise in Using Software and Technology Associated with ETDs

The fourth objective of the study was to determine the self-perceived level of expertise in using software technology associated with ETDs of active graduate faculty members in a research extensive university. Respondents in the study were asked to rate their level of expertise for each of eight software programs that are frequently associated with the preparation of ETDs. The means and standard deviations of the self-ratings for each of the software programs is presented to accomplish this objective.

To facilitate interpretation of the responses to this scale, the researcher established a scale of substantive interpretation. This scale included the following interpretations for the various mean responses: 1.50 or less = Never heard of it; 1.50 to 2.50 = Novice user; 2.51 to 3.49 = Average User; 3.50 to 4.49 = Advanced user; and 4.50 and above = Expert user (see Table 8).

The software with which the respondents reported the highest level of expertise was Microsoft Word, with a mean rating of 3.63 (SD = 0.87). This rating was classified in the "Advanced User" category according to the interpretive scale. The software that received the lowest expertise rating by respondents was

Table 8

Self Rated Level of Expertise in Using Selected Software Programs by Active Graduate Faculty in a Research Extensive University

Software	M	SD	Response Category[a]
Microsoft Word	3.63	.87	Advanced user
			(table continued)
Word Perfect	3.27	1.14	Average user
Microsoft Excel	3.06	1.14	
Adobe Acrobat	3.04	.86	
Adobe Photoshop	2.43	1.00	Novice user
HTML Editors	2.28	1.05	
Microsoft Access	2.05	.96	
Macromedia	1.58	.85	

Note. Response Scale descriptors included: 1=Never heard of it, 2=Novice user, 3=Average user, 4=Advanced user, and 5=Expert user.
[a] Response Category Values: Strongly disagree = 1.50 or less; disagree = 1.51 to 2.50; not sure = 2.51 to 3.49; agree = 3.50 to 4.49; and strongly agree = 4.50 or more.

"Macromedia." This program had a mean rating of 1.58 (SD = 0.85) which placed it

in the "Novice User" interpretive category. Overall, one item was rated in the "Advanced User" category, three items were rated in the "Average User" category, and four items were rated in the "Novice User" category.

In addition to identifying self-rated levels of expertise in the use of selected computer software, the researcher also included experiences with pdf as part of this objective. This measurement involved the "Yes" or "No" response of study participants to three types of experience with .pdf files A total of 287 of the 289 study participants responded to these questions (see Table 9). Of these respondents, 266

Table 9

Whether or Not Active Graduate Faculty at a Research Extensive University had Selected Experiences with .pdf Software

.pdf	Response	Frequency	%
Have you ever:			
Read a .pdf file	Yes	266	92.7
	No	21	7.3
Printed a .pdf file	Yes	259	90.2
	No	28	9.8
Created a .pdf file	Yes	185	64.5
	No	102	35.5

(92.7%) indicated "Yes" when asked if they had read a .pdf file. Additionally, most of the respondents (n = 259, 90.2%) reported that they had printed a .pdf file. However, a smaller number of respondents (n = 185, 64.5%) indicated that they had created a .pdf file.

Possible Options That Graduate Students Should Have in Granting Access to Their ETDs

The fifth objective of the study was to determine the options that students producing ETDs should have for granting access to their ETDs as perceived by graduate faculty members in a research extensive university. To accomplish this objective, the researcher identified the most widely proposed access options for use with ETDs and asked responding faculty members to indicate "Yes" or "No" as to whether or not they felt each should be part of the institution's access policy. The access option that received a "Yes" response by the largest portion of the faculty who answered this item was "World wide, unrestricted access" with the majority (n = 139, 55.2 %) indicating that this should be an access option. It should be noted that 37 study participants did not provide a response to this item. The access option that received the smallest number of "Yes" responses was "LSU campus-wide access only" with only 21.2% (n = 49) of faculty who answered this item indicating, "Yes." Data regarding faculty response to access options is presented in Table 10.

Table 10

Perceptions of Active Graduate Faculty at a Research Extensive University Regarding Whether or Not Selected ETD Access Options Should Be Used

Access	Response	Frequency[a]	%
For each of the following ETD access options please indicate whether or not you think that should be established as part of the access policy.			
World wide, unrestricted access[a]	Yes	139	55.2
	No	113	44.8
The author (student) should be[b] able to specify the access granted	Yes	125	47.7
	No	137	52.3
Unrestricted access granted after[c] One year	Yes	106	44.2
	No	134	55.8
Access granted to certain portions[d] Only (for example only to the abstract)	Yes	95	40.1
	No	142	59.9
LSU campus-wide access only[e]	Yes	49	21.2
	No	182	78.8

[a] 37 respondents did not answer this item, [b] 27 respondents did not answer this item, [c] 49 respondents did not answer this item, [d] 52 respondents did not answer this item, and [e] 58 respondents did not answer this item.

Select Delivery Methods That Should Be Used to Educate Graduate Students About ETDs

The sixth objective of the study was to determine whether or not selected delivery methods should be used to educate graduate students about ETDs as perceived by active graduate faculty in a research extensive university. Faculty were

provided a list of four possible techniques for educating graduate students about ETDs, and they were asked to indicate for each one whether or not they felt it should be used. In addition, respondents were given an "Other" option and asked to specify any other educational techniques they felt should be used.

The training technique that the largest group of responding graduate faculty members indicated should be used was "Web Documents" with 258 (96.3%) marking "Yes" for this method. The second most frequently identified technique (n = 256, 93.4%) was "Workshops." (see Table 11). Slightly more than a third (n = 80,

Table 11

Perceptions of Active Graduate Faculty at a Research Extensive University Regarding Whether or Not the Following Methods Should be Used to Educate Graduate Students About ETDs

Student Training Techniques	Response	Frequency	%
Web Documents [a]	Yes	258	96.3
	No	10	3.7
Workshops [b]	Yes	256	93.4
	No	18	6.6
Brochures [c]	Yes	205	82.0
	No	45	18.0
Course Content [d]	Yes	80	34.8
	No	150	65.2

Note. "Available help desk" and "Brown bag luncheon where students can share what they have learned" were suggested as ways to teach graduate students.
[a] 21 respondents did not answer this item, [b] 15 respondents did not answer this item, [c] 39 respondents did not answer this item and [d] 59 respondents did not answer this item.

34.8 %) of responding faculty indicated that training should be done through "Course Content." "Available help desk" and "Brown bag luncheon where students can share what they have learned" were suggested as other ways to teach graduate students about ETDs.

Faculty Training Needed in the Use of Software Associated with ETDs

The seventh objective of the study was to determine whether or not faculty training is needed in the use of software as perceived by active graduate faculty in a research extensive university. Graduate faculty members were asked (see Table 12)

Table 12

Faculty Training Needed in Select Areas as Perceived by Active Graduate Faculty in a Research Extensive University

Faculty Training Needed	Response	Frequency	%
In order to successfully advise a graduate student to the completion of a thesis or dissertation, a faculty member needs:			
Training in the use of .pdf [a]	Yes	193	71.5
	No	77	28.5
Training in the use of word processing [b]	Yes	140	53.0
	No	124	47.0
Training about the revised graduate school dissertation submission requirement [c]	Yes	68	25.8
	No	196	74.2

[a] 19 respondents did not answer this item, [b] 25 respondents did not answer this item, [c] 25 respondents did not answer this item.

if they needed training in the following selected areas to successfully advise a graduate student to the completion of an electronic thesis or dissertation: the use of .pdf, revised graduate school dissertation submission requirements, and/ or word processing Respondents were asked to indicate "Yes" or "No" to each of the three identified training areas. The area that was identified by the largest number of faculty was "Training in the use of .pdf (n = 193, 71.5%). "Training about the revised Graduate School dissertation submission requirements" was the area that received a "Yes" response by the fewest faculty (n = 68, 25.8%)

Psychological Reactions to ETDs as a Concept

The eighth objective of the study was to determine the self-perceived psychological reactions to ETDs as a concept among active graduate faculty members in a research extensive university. Respondents were provided a list of five psychological reactions to ETDs and were asked to indicate their level of agreement (from 1 = strongly disagree to 5 = strongly agree) that each of the reactions accurately reflects their attitude toward ETD's. The reaction that received the highest level of agreement among the respondents was "Supportive" with a mean rating of 3.86 (SD = 0.93). The reaction that received the lowest level of agreement was "Hostile" with a mean rating of 1.80 (SD = 1.10). To facilitate the interpretation of this data, the researcher established a scale of substantive interpretation that corresponded with the response scale descriptors.

Interpretive categories established included: 1.50 or less = Strongly disagree; 1.51 to 2.50 = Disagree; 2.51 to 3.49 = Not sure; 3.50 to 4.49 = Agree; and 4.50 or

more = Strongly agree. Using this interpretive scale, respondents agreed with one of the psychological reactions (Supportive); they were not sure with regard to two of the reactions (Intrigued and Uncertain); and they disagreed with two of the reactions (Resistant and Hostile) (see Table 13).

Table 13

Psychological Reactions to ETDs as a Concept by Active Graduate Faculty Members at a Research Extensive University

Psychological Reactions			
Listed below are several psychological reactions to the conversion to electronic submissions of theses and dissertations. Please rate each item as to your level of agreement that accurately reflects your attitude toward ETDs	M	SD	Response Category [a]
Supportive [b]	3.86	.93	Agree
Intrigued [c]	3.30	1.09	Not Sure
Uncertain [d]	2.62	1.23	
Resistant [e]	2.05	1.17	Disagree
Hostile [f]	1.80	1.10	Disagree

Note. Response scale descriptors included: 1=strongly disagree, 2=disagree, 3=not sure, 4=agree, and 5=strongly agree

(table continued)

Psychological Reactions

[a] Response Category Values: Strongly disagree = 1.50 or less; disagree = 1.51 to 2.50; not sure = 2.51 to 3.49; agree = 3.50 to 4.49; and strongly agree = 4.50 or more
[b] 18 respondents did not answer this item, [c] 15 respondents did not answer this item, [d] 14 respondents did not answer this item, [e] 15 respondents did not answer this item and 22 respondents did not answer this item.

Scholarly Productivity By Active Graduate Faculty

The ninth objective of the study was to describe graduate faculty members in a research extensive university on selected aspects of their scholarly (see Table 14)

Table 14

Active Graduate Faculty Scholarly Works

Published Work	Response	Frequency	%
What works of your own have been published in the last five years?			
Journal Article in a Peer Refereed Journal[a]	Yes	283	99.3
	No	2	.7
Conference Paper [b]	Yes	243	88.7
	No	31	11.3
Book Chapter [c]	Yes	173	67.8
	No	82	32.2
Book [d]	Yes	89	36.2
	No	157	63.8
Article in an electronic journal [e]	Yes	79	31.1
	No	175	68.9

[a] 4 respondents did not answer this item, [b] 15 respondents did not answer this item, [c] 34 respondents did not answer this item, [d] 43 respondents did not answer this item, and [e] 35 respondents did not answer this item.

productivity. Graduate faculty members were asked to indicate if they had published selected types of publications in the last five years Included in the choices were: Journal Article in a Peer Refereed Journal, Books, Book Chapter, Conference Paper, or Article in an Electronic Journal. The type of publication that was reported to have been published by the largest percentage of respondents was a "Journal article in a peer refereed journal." Only two (0.7%) of the participants who responded to this item indicated that they had not published an article in a peer refereed journal in the last five years. In addition, 243 (88.7%) of the responding faculty members indicated that they had published a "Conference paper" in the last five years. The least frequently reported publication in the past five years was an "Article in an electronic journal" with only 31.1%(n = 79) of the respondents indicating "Yes" to this type of publication.

In addition to the types of publications completed in the last five years, participants were also asked to respond to five items that were designed to measure their perceptions of and involvement in selected other types of scholarly activities (see Table 15). Faculty members were asked if they had a home page on the Internet. The majority of respondents (n = 149, 52.1 %) indicated that they had a home page on the Internet. In addition, faculty were asked to respond to the question, "Have you ever served as the editor of a professional research journal?" In response to this question, 101 (95.1%) indicated "Yes" they had served as an editor of a professional research journal and 187 (64.9%) responded "No."

Table 15

Additional perceptions of and involvement in selected other types of scholarly activities by Active Graduate Faculty

Activity	Response	Frequency	%
Have you ever served as a reviewer for[a] a professional journal?	Yes	272	94.4
	No	16	5.6
Do you think that a dissertation or thesis[b] is a published work?	Yes	169	59.1
	No	117	40.9
Do you have a home page on the Internet?[c]	Yes	149	52.1
	No	137	47.9
Have you ever served as the editor of a[d] professional research journal?	Yes	101	35.1
	No	187	64.9
Do you think that a dissertation or thesis[e] is a peer-review work?	Yes	91	33.2
	No	183	66.8

[a] 1 respondent did not answer this item, [b] 3 respondents did not answer this item, [c] 3 respondents did not answer this item, [d] 1 respondent did not answer this item, and [e] 15 respondents did not answer this item.

To the question "Have you ever served as a reviewer for a professional journal" reply was 272 (94.4 %) "Yes" and 16 (5.6 %) "No". The question to which the lowest number of "Yes" response was given was "Do you think that a dissertation or thesis is a peer-reviewed work?" (n = 91, 33.2%). A total of 169 (59.1 %) said "Yes" and 117 (40.9 %) said "No." In response to the question "Do you think that a dissertation or thesis is a peer-reviewed work", 91 (33.2 %) responded "Yes" and 183 (66.8 %) said "No."

Professional Demographic Characteristics

The tenth objective of the study was to describe faculty in a research extensive university on selected personal and professional demographic characteristics including the following: Age; Gender; Ethnic group; Highest level of education completed; Academic rank; Earned tenure at LSU; College, department and discipline; Administrative appointment concurrent with faculty appointment; Number of master students committee chair for at present; Number of doctoral students committee chair for at present; Time spent in an average school semester week doing teaching, research, administration, and service; Number of credit hours they are teaching this semester; Number of courses teaching this semester; their Official university assignment hours percentages for teaching, research, administration, and service; Average number of hours worked in a typical week directing the research of masters and doctoral students years; number of years employed in higher education; and number of years served as graduate advisor for masters and/or doctoral students.

Variables that were measured on an interval scale were summarized using means and standard deviations, and those that were measured as categorical data were summarized using frequencies and percentages.

Age

One variable on which respondents was described was age. The largest group of faculty indicated that they were in the age category of 46-55 (n = 114, 39.4%). In addition, 78 (27.0 %) were in the 36-45 year age category. Only 10 faculty members (3.5%) indicated that they were in the 66 and over age group (See Table 16).

Table 16

Age of Active Graduate Faculty Members in a Research Extensive University

Age	Frequency	%
35 or less	22	7.6
36 – 45	78	27.7
46 – 55	114	39.4
56 – 65	63	21.8
66 and over	10	3.5
Total	287[a]	100

[a] Two respondents (.7%) chose not to answer this question.

Gender

Respondents were also described on the variable gender. The majority of responding faculty members indicated that they were male (See Table 17).

Table 17

Gender of Active Graduate Faculty Members in a Research Extensive University

Gender	Frequency	%
Male	237	82.6

(table continued)

Female	50	17.4
Total	287	100.0

Note. Two respondents chose not to answer this question.

(n = 237, 82.6 %). In addition, 50 (17.4 %) indicated that they were female.

Ethnic Group

Another variable on which responding faculty were described was ethnic group. The largest group of respondents indicated that they were (see table 18)

Table 18

Ethnic Group of Active Graduate Faculty Members in a Research Extensive University

Ethnic group	Frequency	%
Caucasian	245	84.8
Asian	22	7.9
Black	3	1.0
Hispanic	1	.3
Native American	0	0

Note. Five respondents indicated "Other" in response to ethnic group. Other ethnic groups included: Carribean (n=1), Cajun American (n=1), Other and Caucasian (n=1), and No ethnic group specified (n=2).

Caucasian (n = 245, 84.8%). The next most frequently reported ethnic group was Asian (n = 22, 7.6%). Ethnic groups are reported by participating faculty.

Highest Level of Education Completed

Respondents were asked to report their highest level of education completed by selecting from four options provided. The largest group (See Table 19) indicated that

Table 19

Highest Level of Education Completed by Active Graduate Faculty Members in a Research Extensive University

Highest level of education completed	Frequency[a]	%
Doctoral degree	272	94.5
Master's degree	9	3.1
Other[b] (please specify)	6	2.1
Baccalaureate degree	1	.3
Total	288	100.0

[a] One person chose not to answer this question.
[b] Six faculty members reported other degrees which included Professional Degrees – i.e. Doctor of Veterinary Medicine.

they had completed a doctoral (n = 272, 94.5%) degree. The second most frequently reported degree was a master's degree (n = 9, 3.1%). Six (2.1%) of the respondents indicated an "Other" degree completed

Academic rank

Respondents were asked to indicate their academic rank by marking one of four choices: Professor, Associate Professor, Assistant Professor, or Instructor. The majority of respondents (n = 154, 54.0%) indicated that their rank was professor. Only one person (.3%) reported their rank as instructor. In addition, two study participants did not report their academic rank (See Table 20).

Table 20

Academic Rank of Active Graduate Faculty Members in a Research Extensive University

Academic Rank	Frequency	%
Professor	154	54.0
Associate Professor	82	28.4
Assistant Professor	50	17.3
Instructor	1	.3
Total	287	100.0

Note. Two respondents chose not to answer this question.

Tenure Status

Faculty were asked to indicate their tenure status as either tenured or not tenured. A total of 229 (80.4 %) faculty members responded indicating that they were tenured and 56 (19.6 %) faculty responded that they were not tenured. (See Table 21).

Table 21

Tenure Status of Active Graduate Faculty Members in a Research Extensive University

Tenured	Frequency[a]	%
Yes	229	80.4
No	56	19.6
Total	285	100.0

[a] Four respondents chose not to answer this question.

College, Department and Discipline

Study participants were asked to provide information regarding their college department/school, and discipline within the department. Regarding the information on college, the largest group of respondents (n = 61, 21.1%) indicated that they were faculty members in the College of Arts and Sciences. The second most frequently reported college was the College of Agriculture (n = 59, 20.4 %). In addition, 56 (19.4 %) reported that they were faculty members in the College of Basic Sciences and 39 (13.5 %) were in Engineering. The frequency and percentage of faculty who reported that they were faculty members in the colleges officially recognized by the university are presented in Table 22 and Figure 3.

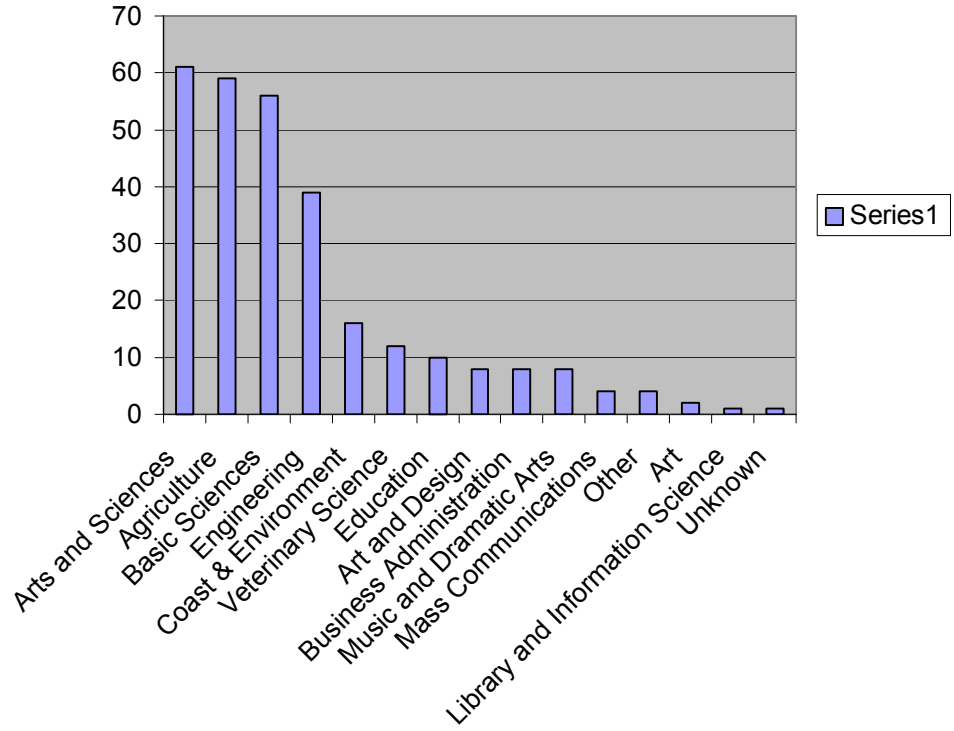

Figure 3: Colleges of Responding Graduate Faculty.

Table 22

College of Primary Academic Appointment as Reported by Active Graduate Faculty in a Research Extensive University

Table of colleges and schools with the most graduate faculty	Frequency	%
Arts and Sciences	61	21.1
Agriculture	59	20.4
Basic Sciences	56	19.4
Engineering	39	13.5

(table continued)

Table of colleges and schools with the most graduate faculty	Frequency	%
Coast & Environment	16	5.5
Veterinary Science	12	4.2
Education	10	3.5
Art and Design	10	3.4
Business Administration	8	2.8
Music and Dramatic Arts	8	2.8
Mass Communications	4	1.4
Other	4	1.7
Library and Information Science	1	.3
Total	288	100.0

Note. 1 (.3 %) respondent chose not to respond so as not to be identified. A complete list of all faculty responses is presented in Appendix G.

Responding faculty in response to the question regarding "their college" identified a number of other units. In cases where the response could clearly be classified into one of the university's primary colleges/schools, the researcher made this adjustment to the data. For example, if a respondent indicated that their college was "Mechanical Engineering" their response was combined with the data from the

College of Engineering. However, in cases where it was not possible to be certain of the correct college, the information provided by the respondent was reported as provided. The complete list of responses provided by study participants as to their college is included in Appendix G.

Faculty members were also asked to report the department/school where the primary position of their academic appointment was housed. The department that was reported by the largest number of faculty was Biological Sciences (n = 28, 9.68%). More than 10 respondents reported three other departments. They including Forestry, Wildlife and Fisheries (n = 14, 4.84 %), Mechanical Engineering (n = 13, 4.49 %) and English (n = 12,4.15 %) (See Table 23). Respondents in the study identified a total of 85 different departments/schools. Complete listings of the responses are presented in Appendix G.

Table 23 – Department/School of Greatest Primary Academic Appointment as Reported by Active Graduate Faculty in a Research Extensive University

Department	Frequency	%
Biological Science	28	9.68
Forestry, Wildlife and Fisheries	14	4.84
Mechanical Engineering	13	4.49
English	12	4.15

Note. A complete list of all faculty responses is presented in Appendix G.

Faculty were also asked to identify their discipline within their department that made up the primary portion of their academic appointment. The 222 faculty who answered this item reported a total of 160 disciplines. Most of the disciplines identified were reported by only one faculty member. However, five or more respondents reported that they came from the same discipline. These included Wildlife (n = 7, 2.42 %) and Geography (n = 5, 1.73 %) (See Table 24). A complete list of all faculty responses is presented in Appendix G.

Table 24 - Discipline of Greatest Primary Academic Appointment as Reported by Active Graduate Faculty in a Research Extensive University

Discipline	Frequency	%
Wildlife	7	2.42
Geography	5	1.73

Note. 67 chose not to answer this question. A complete list of all faculty responses is presented in Appendix G.

Administrative Appointment Concurrent With Faculty Appointment

Responding faculty were also asked to indicate if they held an administrative appointment concurrently with their faculty appointment, and if so to identify their administrative title. A total of 65 (22.5%) respondents reported that they did hold an administrative appointment. These 65 respondents (see Table 25) were asked to

indicate for each of five different administrative titles whether or not they held that title.

In addition, respondents were also provided with an "Other" response option and asked to specify the administrative title if they chose "Other." Thirty of those

Table 25

Administrative Appointment Held Concurrently with Faculty Appointment of Active Graduate Faculty Members in a Research Extensive University

Administrative appointment	Response	Frequency	%
Do you hold an administrative appointment concurrent with your faculty appointment?	Yes	65	22.5
	No	220	76.1
If yes, please indicate your title:			
a. department chair		18	27.7
b. college/school dean		2	3.1
c. Coordinator of graduate programs		16	24.6
d. assistant or associate dean		1	1.5
d. other[a] _____(please specify)		30	46.2

Note. 4 respondents chose not to answer this question.
[a] 24 of the 30 who indicated "Other" specified an other title. These titles as reported are presented in Appendix H.

who held administrative appointments indicated an "Other" title. Of these 30 respondents, 24 did specify an "Other" title. Each of these specified titles was unique, and the complete list of "Other" titles as specified by respondents is presented in Appendix H. Of those provided, the title that was reported by the largest number of respondents was "Department chair" with 18 (27.7 %) of those who indicated that they

held an administrative appointment reporting that they had this title. In addition, 16 (24.6 %) indicated that they were the "Coordinator of graduate programs."

Number of Masters Thesis Students' Committee Chairing at Present

Study participants were also asked to report the number of master thesis students' committees they were currently chairing. Responses to this question ranged from a low of 0 to a high of 12 with a mean number of master committee chairmanships of 1.66 (SD = 2.10).

Number of Doctoral Dissertation Students' Committees Chairing at Present

Faculty were also asked to report the number of doctoral dissertation students' committees they were currently chairing. Responses to this question ranged from a low of 0 to a high of 13 with a mean number of doctoral committee chairmanships of 2.05 (SD = 2.12).

Time Spent in an Average School Semester Week Doing Teaching, Research, Administration, and Service

Respondents in the study were asked to indicate the percent of their time in a typical week during the semester that they spent in each of the following activities: teaching, research, administration, service, and other. [While the percentages provided in the responses should logically sum to a total of 100%, some respondents indicated percentages that did not total 100. All of the study participants whose responses did not sum to 100% were re-checked to verify that their responses had been recorded correctly, and the data was then used as it was provided in the instrument. Therefore, the total of the mean percentages for the five response areas did not equal 100].

In examining the percent of time reported to be spent in each of the specified areas, the largest mean percent of time spent was in the (see Table 26) area of research

Table 26

Time Spent in an Average School Semester Week Doing Teaching, Research, Administration, Service, and Other by Active Graduate Faculty Members in a Research Extensive University

Time spent	M	SD	Low %	High %
Researching (including funded and unfunded research)	42.4	19.51	0	100
Teaching including graduate advising)	37.3	17.94	0	100
Service	10.63	10.51	0	60
Administration	9.32	15.82	0	90
Other (please specify)[a]	1.04	6.19	0	60

Note. Figures were given in percentages by respondents for this question.
[a] 9 of the 13 who indicated "Other" Specified the "Other". The list of these "Other" areas is presented in Appendix I.

(mean = 42.4, SD = 19.51). The percent of time spent in research activities ranged from a low of 0 to a high of 100. The overall mean percent of time spent in teaching activities was 37.3 (SD = 17.94) with individual responses ranging from 0 to 100

Number of Credit Hours Teaching this Semester

Responding faculty members were also asked to indicate the number of credit hours they were teaching during the current semester (see Table 27). The most

Table 27

Number of Credit Hours Being Taught in Current Semester by Active Graduate Faculty Members in a Research Extensive University

Number of credit hours they are teaching	Credit	Frequency	%
	0	54	18.7
	1	4	1.4
	2	6	2.1
	3	79	27.3
	4	21	7.3
	5	10	3.5
	6	75	26.0
	7	11	3.8
	8	4	1.4
	9	18	6.2
	10	1	.3
	11	1	.3
	12	5	1.7
Total		289	100.0

Note. The mean number of credit hours being taught was 4.11 (SD = 2.84).

frequently reported number of credit hours being taught was three (n = 79, 27.3 %). Additionally, 75 (26.0 %) indicated that they were teaching six credit hours and 54

(18.7 %) reported that they were teaching zero credit hours. The mean number of credit hours being taught was 4.11 (SD = 2.84). Information regarding number of credit hours taught is presented in Table 27.

Number of Courses Teaching This Semester

Study participants were also asked to respond to a question regarding the number of courses they were teaching in the current semester. The most frequently reported teaching load was two courses (n = 113, 39.1 %). In addition, almost one third of the respondents (n = 93, 32.2 %) indicated as presented in Table 28, that they were currently teaching one course; and 56 (19.4 %) indicated that they were teaching no courses currently. The mean number of courses being taught by the respondents was 1.34 (SD = 0.93). Number of courses taught is presented in Table 28.

Table 28

Number of Courses Being Taught in Current Semester by Active Graduate Faculty Members in a Research Extensive University

Number of courses they are teaching	Number	Frequency	%
	0	56	19.4
	1	93	32.2
	2	113	39.1
	3	24	8.3
	4	3	1.0
Total		289	100.0

Note. The mean number of courses being taught was 1.39 (SD = .93).

Official University Assignment Percentages for Teaching, Research, Administration, and Service

Respondents in the study were asked to indicate the official university assignment percentages for: teaching, research, administration, service, and other. While the percentages provided in the responses should logically sum to a total of 100 %, some respondents indicated percentages that did not total 100 (see Table 29).

Table 29

Official University Assignment Percentages for Teaching, Researching, Administration, Service, and Other by Active Graduate Faculty Members in a Research Extensive University.

Official university assignment hours percentages	M	SD	Low %	High %
Researching[a] (including funded and unfunded research)	48.58	21.18	0	100
Teaching[b] (including graduate advising)	42.83	21.17	0	100
Administration[c]	4.99	15.34	0	100
Service[d]	3.34	10.06	0	75
Other[e] (please specify)	.26	3.50	0	50

Note. Figures were given in percentages by faculty members and the following answered zero for their official assignment hours for: [a] n= 19, [b] n = 14, [c] n = 217, [d] n = 216, [e] n = 253. Also, 34 faculty members chose not to answer this question or did not know. Two respondents answered "Other and is reported as specified in Appendix I.

All study participants whose responses did not sum 100 % were re-checked to verify that their responses had been recorded correctly, and the data was then used as it was provided in the instrument. Therefore, the total of the mean percentages for the response areas do not equal 100. From returned data, a mean percentage for each official work area was computed. In examining the official assigned percent of time in each of the specified areas, the largest mean percent of time was in the area of research (M = 48.58, SD = 21.18) The percent of time officially assigned to research activities ranged from a low of 0 to a high of 100. The second highest percentage of time was assigned to teaching activities (M = 42.83, SD = 21.17) with individual responses ranging from 0 to 100.

Average Number of Hours Worked in a Typical Week Directing the Research of Each Masters Thesis Student

Participating faculty were also asked to respond to the question, "Approximately how many hours do you spend in a typical week directing the research of each of your masters thesis students?" Of the 187 faculty who indicated that they were serving as committee chair for one or more masters' thesis students, the reported number of hours ranged from a low of 0 to a high of 30 hours. The mean number of hours reported to be spent directing the work of masters thesis students per week was 3.6 (SD = 3.90).

Average Number of Hours Worked in a Typical Week Directing the Research of Each Doctoral Dissertation Student

In addition to the number of hours they spent working with masters thesis students, faculty were asked to indicate how many hours they spent per week directing

the research of each of their doctoral dissertation students. For the 215 faculty who indicated that they were currently serving as chair of one or more doctoral dissertation students, the mean number of hours reported was 4.4 (SD = 3.30). Reported times ranged from a low of 0 to a high of 20 hours per week.

Years Employed as a Faculty Member in Higher Education

Faculty who participated in the study were also asked to report the years they had been employed as a faculty member in higher education. A total of 282 faculty provided responses to this question. The number of years working in higher education reported ranged from a low of 1 to high of 40. The mean years working in higher education was 17.0 (SD = 9.81).

Average Number of Years in Higher Education Serving as a Graduate Advisor for Masters and/or Doctoral Students

Regarding the number of years having served as a graduate advisor, the years reported by the 283 responding faculty ranged from a low of 1 to a high of 38. The mean number of years that these faculty had been advising graduate students in the higher education setting was 15.1 (SD = 9.37).

Comments Given on the Survey in the Margins

Comments given on the survey in the margins that were relevant to the survey appear in APPENDIX E.

Comments Given to Question 19, an Open Question, by the Respondents

Comments given on the survey in the margins that were relevant to the survey appear in APPENDIX F.

Relationships Between Perceptions Regarding ETDs and Selected Personal and Professional Demographic Characteristics

The eleventh objective of the study was to determine if significant relationships exist between perceptions regarding ETDs among active graduate faculty in a research extensive university and each of the following personal and professional demographic characteristics: Age; Gender; Academic Rank; Whether or not the faculty member was tenured; Number of masters student committee serving as chair for at present; Number of doctoral student committee serving as chair for at present; Time spent in an average school semester week teaching and Years served as graduate advisor for masters and/or doctoral students. The two ETD perception sub-scales were, " Problems Associated with ETDs" and "Advantages of ETDs." They were identified in the factor analysis as items in the ETD perception scale. Each of the eight variables in the objective was used as an independent variable and the association between each independent variable and the two sub-scale scores was examined.

a. The first variable examined for relationships with perceptions regarding ETDs was the variable age. To examine this objective, the researcher determined that the most appropriate statistical procedure to use was the Spearman's rho correlation coefficient. The correlation with the " Problems Associated with ETDs" sub-scale score was not found to be significant ($r = -.05$, $p = .43$) and neither was the correlation with the "Advantages of ETDs" sub-scale score ($r = .05$, $p = .45$).

b. The second independent variable examined for relationships with perceptions regarding ETDs was the variable gender. To examine this objective, the researcher determined that the most appropriate statistical procedure was to compare the sub-scale scores by categories of the independent variable. This procedure allowed a more easily interpreted set of results. The independent t-test procedure was used to accomplish this objective. No significant differences were found in either of the two sub-scale scores by categories of the variable gender (see Table 30).

Table 30

Comparison of Perceptions Regarding ETDs by Gender Among Active Graduate Faculty Members at a Research Extensive University

Sub-Scale	Male		Female		t	df	p
	Mean	SD	Mean	SD			
Problems with ETDs	3.74	.63	3.69	.67	-.48	284	.63
Advantages of ETDs	3.12	.68	3.07	.69	-.44	284	.66

c. The third independent variable examined for relationships with perceptions regarding ETDs was the variable academic rank. To accomplish this objective, the researcher determined that the most appropriate statistical procedure was the One Way Analysis of Variance (ANOVA) to compare perception scores by categories of the variable Academic Rank. The variable academic rank had four levels: Professor, Associate Professor, Assistant Professor and Instructor.

However, only one respondent in the study was at the instructor rank, therefore this category of rank was eliminated from the current analysis (see Table 31).

Table 31

Comparison of Perceptions Regarding ETDs by Academic Rank of Active Graduate Faculty at a Research Extensive University

Sub-Scale	N	Mean	SD
Problems with ETDs			
Full Prof	154	3.73	.66
Assoc Prof	82	3.82	.59
Asst Prof	49	3.60	.62
Overall	285	3.73	.63
Advantages of ETDs			
Full Prof	154	3.16	.70
Assoc Prof	82	3.06	.70
Asst Prof	49	3.06	.61
Overall	285	3.11	.68

Note. The level, instructor, is not included because there was only one.

Mean values for the two sub – scales for each of the faculty academic ranks are presented in Table 32. When each of the sub-scales was compared by

categories of academic rank using the oneway ANOVA procedure, no significant differences were identified (See Table 32).

Table 32

Analysis of Variance of Perception Sub – Scales Regarding ETDs by Academic Rank

Source	df	SS	MS	F	p
Problems with ETDs					
Between groups	2	1.43	.72	1.79	.17
Within groups	282	112.93	.40		
Total	284	114.36			
Advantages of ETDs					
Between groups	2	.70	.35	.75	.48
Within groups	282	131.64	.47		
Total	284	132.34			

d. The fourth independent variable examined for relationships with perceptions regarding ETDs was the variable whether or not the faculty member was tenured. To examine this objective, the researcher determined that the most appropriate statistical procedure was to compare the sub-scale scores by categories of the independent variable. Independent t-tests were used to

accomplish this analysis. No significant differences were found in either of the two sub-scale scores by categories of the variable tenure (see Table 33).

Table 33

Comparison of Perceptions Regarding ETDs by Whether or not Active Graduate Faculty at a Research Extensive University were Tenured

Sub-Scale	Tenured		Not tenured		t	df	p
	Mean	SD	Mean	SD			
Problems with ETDs	3.75	.64	3.64	.61	1.17	282	.24
Advantages of ETDs	3.13	.70	3.04	.59	0.89	282	.37

e. The fifth independent variable examined for relationships with perceptions regarding ETDs was the variable number of master's thesis student committees chairing at present. To accomplish this purpose, the researcher determined that the most appropriate statistical procedure was to use the Pearson Product Moment correlation coefficient. The correlation with the " Problems Associated with ETDs" sub-scale score was not found to be significant ($r = -.07$, $p = .23$), and neither was the correlation with the "Advantages of ETDs" sub-scale score ($r = -.01$, $p = .87$).

f. The sixth independent variable examined for relationships with perceptions regarding ETDs was the variable number of doctoral dissertation student committees chairing at present. To examine this objective, the researcher

determined that the most appropriate statistical procedure was the Pearson Moment correlation coefficient. The correlation with the " Problems Associated with ETDs" sub-scale score was not found to be significant (r = .03, p = .63), and neither was the correlation with the "Advantages of ETDs" sub-scale score (r = -.10, p = .08).

g. The seventh independent variable examined for relationships with perceptions regarding ETDs was the variable time spent in a typical school semester week in a teaching role (including graduate student advising). To examine this objective, the researcher determined that the most appropriate statistical procedure was the Pearson Product Moment correlation coefficient. The correlation with the " Problems Associated with ETDs" sub-scale score was not found to be significant (r = -.09, p = .13), and the "Advantages of ETDs" sub-scale score (r = .02, p = .78) was also not found to be significantly related.

h. The eighth independent variable examined for relationships with perceptions regarding ETDs was the variable years served as graduate advisor for masters and/or doctoral students. To examine this objective, the researcher determined that the most appropriate statistical procedure was to use Pearson Product Moment correlation coefficient. The correlation the " Problems Associated with ETDs" sub-scale score was not found to be significant (r = -.01, p = .92), nor was the correlation with the "Advantages of ETDs" sub-scale score (r = .09, p = .14).

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The primary purpose of this study was to determine the perceptions of the faculty in a research extensive university regarding the advantages, disadvantages, and needed preparation and support for the implementation of a system of electronic submission for theses and dissertations within the institution.

The following specific objectives guided the researcher:

1. Determine attitudes toward using new technologies in their teaching and research by faculty members in a research extensive university.
2. Determine attitudes of graduate faculty in a research extensive university toward ETDs.
3. Determine familiarity with and knowledge of ETDs by the graduate faculty members in a research extensive university.
4. Determine the self-perceived level of expertise in using software technology associated with ETDs of graduate faculty members in a research extensive university.
5. Determine the options that students producing ETDs should have for granting access to their ETDs as perceived by graduate faculty members in a research extensive university.

6. Determine whether or not selected delivery methods should be used to educate graduate students about ETDs as perceived by graduate faculty in a research extensive university.
7. Determine whether or not faculty training is needed in the use of software as perceived by graduate faculty in a research extensive university.
8. Determine the self-perceived psychological reactions to ETDs as a concept among graduate faculty members in a research extensive university.
9. Describe graduate faculty members in a research extensive university on selected aspects of their scholarly productivity.
10. Describe faculty in a research extensive university on selected personal and professional demographic characteristics including the following: Age; Gender; Ethnic group; Highest level of education completed; Academic rank; Earned tenure at LSU; College, department and discipline; Administrative appointment concurrent with faculty appointment; Number of master students committee chair for at present; Number of doctoral students committee chair for at present; Time spent in an average school semester week doing teaching, research, administration, and service; Number of credit hours they are teaching this semester; Number of courses teaching this semester; Official university assignment hours percentages for teaching, research, administration, and service; Average number of hours worked in a typical week as chair for a masters or doctoral student semester; and Total number of years in their career as committee chair for a masters or doctoral students.

11. Determine if significant relationships exists between perceptions regarding ETDs among active graduate faculty in a research extensive university and each of the following personal and professional demographic characteristics: Age; Gender; Academic Rank; Earned Tenure; Number of master students committee chair for at present; Number of doctoral students committee chair for at present; Time spent in an average school semester week doing teaching and Years served as graduate advisor for masters and/or doctoral students years.

Methodology

The target population for this study was graduate advisors in higher education. The accessible population was defined as graduate advisors at a research extensive university located in the southern portion of the United States who were currently advising one or more students in the thesis or dissertation phase of their graduate career. The sample consisted of all graduate faculty members who were identified as the instructor of record for thesis or dissertation credit (8000 or 9000 courses) on 8 September 2001 by using the online directory (PAWS). A total of 581 faculty members were identified who met the criteria for inclusion in the sample. However a total of 19 frame errors were identified during data collection reducing the drawn sample to 562.

The instrument used in this study consisted of three parts. The first section was designed to measure the overall perceptions of faculty regarding new technologies. This was a modified version of a scale developed at Rick's College

(Rick's College Faculty Media Needs Survey, 2000). The second part of the instrument was a researcher developed scale which was designed to measure the perceptions that faculty held regarding Electronic Theses and Dissertations. Part three of the instrument was a researcher developed demographic form that described survey completers on selected personal and professional characteristics.

Data for this study were collected by mailed survey. Questionnaires were distributed to the members of the sample through the campus mail procedures of the university utilized in the study. The mailing consisted of a copy of the survey, a cover letter, and a self-addressed envelope stamped with first class postage so that respondents could return the survey directly to the researcher. Each questionnaire was coded with an identification number for non-response follow-up only.

Non-response follow-up procedures used in the study included a second copy of the instrument approximately two weeks after the initial mailing. Random selected non-respondents were called in the order SAS had ordered them for non-respondents for 30 faculty members. A total of 289 surveys were collected in a five-week period, which is a 52 % response rate of the drawn sample.

Findings

The first objective of the study was to determine attitudes toward using new technologies in their teaching and research by faculty members in a research extensive university. This objective was accomplished by asking respondents to rate ten statements about technology on a five point Likert - type scale, ranging from strongly disagree to strongly agree. It was determined that the items from the "Perceptions

About New Technologies" Scale, with which the respondents most agreed included, "I am comfortable in using new technology" (M = 3.85, SD = .94) and "In general, I like to work with new technologies" (M = 3.81, SD = .98).

To summarize the data further, the items were factor analyzed and two constructs were identified. The two constructs were identified as "Personal Issues" and "Institutional Issues." Whereas, some of the items in the "Perceptions About New Technologies" scale were designed as reverse coded items, it was necessary to recode the items prior to calculation of the sub-scale scores so that for all items positive attitudes toward the use of new technology were represented consistently by the data. The recoding was completed so that for all items the higher response value represented a more positive attitude toward the use of new technology. After the sub-scales were identified, a sub-scale score was calculated for each of the identified scales. These scores were defined as the mean of the items included in each of the respective scales. Since part of the items were recoded, the sub-scale scores no longer reflect simply agreement or disagreement with the items in the sub-scale. The first factor identified in the scale related to "Personal Issues." The sub-scale mean scores for the "Personal Issues" scale ranged from a low of 1.0 (the lowest possible score) to a high of 5.0 (the highest possible score) with a mean of 3.78 (SD = 0.82). The second factor identified in the scale was "Institutional Issues." For the "Institutional Issues" sub-scale, the individual subject scores ranged from a low of 1.60 to a high of 4.80 with an overall mean of 3.43 (SD = 0.65).

The second objective of the study was to determine attitudes of graduate faculty in a research extensive university toward ETDs. This portion of the survey was researcher developed. Respondents were asked to rate thirteen statements on a five point Likert - type scale, ranging from strongly disagree to strongly agree. The items from the "General Perceptions About ETDs" Scale with which the respondents most agreed included "ETDs will increase the access of faculty and graduate students to important research literature" ($\underline{M}$ = 3.87, $\underline{SD}$ = 1.04) and "The advantages of ETDs outweigh their disadvantages" ($\underline{M}$ = 3.61, $\underline{SD}$ = 1.00). Both of these items were classified in the "Agree" category using the researcher designed interpretive scale.

The items were factor analyzed and two constructs were identified. The two constructs were identified as "Problems Associated with ETDs" and "Advantages of ETDs." Whereas some of the items in the "General Perceptions About ETDs" scale were designed as reverse coded items, it was necessary to recode the items prior to calculation of the sub-scale scores so that for all items positive attitudes toward the use of new technology were represented consistently by the data. The recoding was completed so that for all items the higher response value represented a more positive attitude toward the use of new technology. Following this procedure, a mean score was computed for each of the sub-scales identified in the factor analysis. Since part of the items were recoded, the sub-scale scores no longer reflect simply agreement or disagreement with the items in the sub-scale.

The first factor identified in the scale related to "Disadvantages Associated with ETDs." The individual subject mean scores ranged from a low of 1.88 to a high of 5.0 (M = 3.73, SD = .63).

The second factor identified in the scale related to "Advantages of ETDs." The individual subject means ranged from a low of 1.2 to a high of 5.0. (M = 3.11, SD = .68.

The third objective of the study was to determine familiarity with and knowledge of ETDs by the graduate faculty members in a research extensive university. This objective was accomplished through the use of faculty responses to a series of items designed to identify their knowledge of and utilization of ETDs. Most of these items called for a categorical response of "Yes" or "No." The first item and the one which received the largest percentages of "Yes" responses was "Have you used the Internet in the last six months to search online databases in your field (Examples Medline, ERIC, PsycINFO)." More than 90.3% (n = 260, 90.3%) of the 288 individuals who responded to this item indicated "Yes." Respondents were then asked "Have you ever seen an ETD?" Most of the respondents (286 of the 289 total participants) answered this item, and slightly more than one fifth (n = 58, 20.3 %) indicated "Yes" that they had seen an ETD. Faculty in this category had in the last month had consulted from one to a six ETDs. The overall average number of ETDs consulted was 1.52 (SD = 1.12). Respondents were asked "Have you ever downloaded an ETD?" Forty nine answered the question, of which 24 (49%) said "Yes" and 25 (51%) said "No." Finally, these same 58 participants were asked "Have

you ever searched any of the ETD libraries?" Almost three-fourths (n = 37, 74%) of the 50 subjects who answered the question responded "No," and 13 (26 %) or one fourth indicated "Yes" that they had searched an ETD library.

The fourth objective of the study was to determine the self-perceived level of expertise in using software technology associated with ETDs of graduate faculty members in a research extensive university. To accomplish this objective faculty were asked about eight software programs, Microsoft Word, Word Perfect, Microsoft Excel, Adobe Acrobat, Adobe Photoshop, HTML Editors, Microsoft Access, and Macromedia. The software with which the faculty respondents reported the highest level of expertise was Microsoft Word, with a mean rating of 3.63 (SD = 0.87). This rating was classified in the "Advanced User" category according to the interpretive scale. The software that received the lowest expertise rating by respondents was "Macromedia." This program had a mean rating of 1.58 (SD = 0.85) which placed it in the "Novice User" interpretive category.

The researcher also included the experiences with ".pdf" as part of this objective. A total of 287 of the 289 study participants responded to these questions. Of these respondents, 266 (92.7%) indicated "Yes" when asked if they had read a ".pdf" file. In addition, most of the respondents (n = 259, 90.2%) reported that they had printed a .pdf file. However, a smaller number of respondents (n = 185, 64.5%) reported that they had created a ".pdf" file.

The fifth objective of the study was to determine the options that students producing ETDs should have for granting access to their ETDs as perceived by

graduate faculty members in a research extensive university. The researcher identified the most widely proposed access options for use with ETDs and asked responding faculty members to indicate, "Yes" or "No." The access option that received a "Yes" response by the largest portion of the faculty who answered this item was "World wide, unrestricted access" with the majority (n = 139, 55.2 %) indicating that this should be an access option. The smallest number of "Yes" responses was "LSU campus-wide access only" with only 21.2% (n = 49) of faculty who answered this item indicating "Yes."

The sixth objective of the study was to determine whether or not selected delivery methods should be used to educate graduate students about ETDs as perceived by graduate faculty in a research extensive university. In descending order of "Yes" was "Training graduate students about ETDs using Web Documents" was marked "Yes" by 258 (96.3%) of the faculty and "No" was marked by 10 (3.7%) of the faculty members. "Workshops" were asked for by 256 (93.4%) faculty members and not by 18 (6.6%). "Brochures", as a method of educating graduate students, was marked "Yes" by 205 (82.0%) and "No" was marked by 45 (18.0%) by faculty members. "Course Content" was marked as "Yes" by 80 (34.8%) of graduate faculty members and "No" was marked by 150 (65.2%) of graduate faculty members who thought that it was not part of their job.

The seventh objective of the study was to determine whether or not faculty training is needed in the use of software as perceived by graduate faculty in a research extensive university. Graduate faculty members were asked if they needed in service

training in the use of .pdf, revised graduate school dissertation submission requirements, or training in the use of word processing. Graduate faculty selected "Yes" by 140 (53.0%) and "No" by 124 (47.0%) for training in the use of word processing. As for Training in the use of .pdf, 193 (71.5%) selected "Yes" and 77 (28.5 %) selected "No".

The eighth objective of the study was to determine the self-perceived psychological reactions to ETDs as a concept among graduate faculty members in a research extensive university. This is measured using the mean and standard deviation of each item in the scale. Graduate faculty agreed that they were "Supportive", ($\underline{M}$ = 3.86) ($\underline{SD}$ = .93).

The ninth objective of the study was to describe graduate faculty members in a research extensive university on selected aspects of their scholarly productivity. Graduate faculty members were asked to indicate if they had published selected types of publications in the last five years. Included in the choices were: Journal Article in a Peer Refereed Journal, Books, Book Chapter, Conference Paper, or Article in an Electronic Journal. The type of publication that was published by the largest percentage of respondents was a "Journal article in a peer refereed journal." Only two (0.7%) of the participants who responded to this item indicated that they had not published an article in a peer refereed journal in the last five years. In addition, 243 (88.7%) of the responding faculty members indicated that they had published a "Conference paper" in the last five years. The least frequently reported publication in

the past five years was an "Article in an electronic journal" with only 31.1%(n = 79) of the respondents indicating "Yes" to this type of publication.

The tenth objective of the study was to describe faculty in a research extensive university on selected personal and professional demographic characteristics including the following: Age; Gender; Ethnic group; Highest level of education completed; Academic rank; Earned tenure at LSU; College, department and discipline; Administrative appointment concurrent with faculty appointment; Number of master students committee chair for at present; Number of doctoral students committee chair for at present; Time spent in an average school semester week doing teaching, research, administration, and service; Number of credit hours they are teaching this semester; Number of courses teaching this semester; Official university assignment hours percentages for teaching, research, administration, and service; Average number of hours worked in a typical week as chair for a masters or doctoral student semester; and Total number of years in their career as committee chair for a masters or doctoral students.

The largest number of graduate faculty reported that they were in the 46 – 55 year old age range (n = 114, 39.4%), which is followed by the 36 – 45 year old age range (n = 78, 27.0%). Most faculty members were males (n = 237, 82.6%), while females comprise 17.4 % (n = 50) of the survey respondents. The largest ethnic group was Caucasian, (n = 245, 84.8 %. The highest level of education completed by the majority of respondents was a Doctoral degree (n = 272, 94.1 %). Regarding

academic rank, the majority of respondents (n = 154, 54.0%) indicated that their rank was professor.

A total of 229 (80.4 %) faculty members responded indicating they were tenured and 56 (19.6 %) responded that they were not tenured. The average number of years employed as faculty in higher education was 17 years, (SD = 9.81). The least number of years employed was one and the most number of years that a faculty member had been employed in higher education was forty. The average number of years graduate school faculty who responded had been in higher education serving as a graduate advisor for masters and/or doctoral students is 15.1 years (M = 15.1, SD = 9.37). The least time was less than a year and the most time was thirty-eight years.

The greatest group of faculty in the survey came from the College of Arts and Sciences, (n = 61, 21.1 %). In addition, 59 respondents (20.4 %) were from the College of Agriculture and 56 respondents (19.4 %) were from the College of Basic Sciences. Most members (n = 220 (76.1%) of this graduate school faculty reported that they did not hold an administrative appointment concurrently with their faculty appointment. Of those who answered "Yes", regarding having an administrative appointment, 27.7 % held the title of department chair.

Respondents were asked for the number of master student committees that they were chairing at present. Responses to this question ranged from a low of 0 to a high of 12 with a mean number of master committee chairmanships of 1.66 (SD = 2.10).

Respondents were asked for the number of doctoral student committees that they were chairing at present. Responses to this question ranged from a low of 0 to a high of 13 with a mean number of doctoral committee chairmanships of 2.05 (SD = 2.12).

Faculty was asked to indicate their official university assignment percentages for teaching (including graduate advising), researching, administration, service, and other (please specify). From the survey the largest mean percent of time that faculty were officially assigned to was in the area of research (M = 48.58, SD = 21.18). The second highest percentage of time was spent officially in teaching activities with a mean of 42.83 (SD = 21.17).

The Faculty was also asked to indicate the portion of their average working day that they actually spent in the following areas: teaching (including graduate advising), research (including funded and unfounded research), administration, service, and other (please specify). The largest mean percent of time spent was in the area of research (mean = 41.4, SD = 20.35). The overall mean percent of time spent in teaching activities was 36.4 (SD = 18.63).

Responding faculty members were also asked to indicate the number of credit hours they were teaching during the current semester. The most frequently reported number of credit hours being taught was three (n = 79, 27.3 %). Additionally, 75 (26.0 %) indicated that they were teaching six credit hours, and 54 (18.7 %) reported that they were teaching zero credit hours. The mean number of credit hours being taught was 4.1 (SD = 2.84).

Faculty members reported an average time worked as chair for a masters student in a typical week as 3.6 hours (M = 3.6, SD = 3.90). The least number of hours worked was one and the highest number of hours worked in a typical week as chair for a masters student was thirty. While, on average the number of hours worked in a typical week as chair for a doctoral student was 4.4 hours, (M = 4.4, SD = 3.30). The least hours worked with a student was one and the most hours worked was twenty hours.

Faculty were asked "How many years have you been employed as a faculty member in higher education" and "How many of your years in higher education have you served as graduate advisor for masters and/or doctoral students?" The average number of years employed as faculty in higher education was 17.0 years, (M = 17.0, SD = 9.81). The least number of years employed was one and the most number of years that a faculty member had been employed in higher education was forty. The average number of years served in higher education as a graduate advisor for masters and/or doctoral students was 15.1 (M = 15.1, SD = 9.37) years. The least time was less than a year and the most time was thirty eight years.

The eleventh objective of the study was to determine if significant relationships exists between perceptions regarding ETDs among active graduate faculty in a research extensive university and each of the following personal and professional demographic characteristics: Age; Gender; Academic Rank; Earned Tenure; Number of master students committee chair for at present; Number of doctoral students committee chair for at present; Time spent in an average school

semester week doing teaching and Years served as graduate advisor for masters and/or doctoral students years.

The two sub-scales were, " Problems Associated with ETDs" and "Advantages of ETDs." They were identified in the factor analysis conducted for the items and by the researcher as possible areas to explore. Each of the eight variables in the objective was used as the independent variable and the association between each independent variable and the two sub-scale scores was examined.

a. The first independent variable examined for relationships with perceptions regarding ETDs was the variable age. To examine this objective, the researcher determined that the most appropriate statistical procedure was to use Spearman's rho for correlations are done after numbers are converted to ranks. The correlation with the " Problems Associated with ETDs" sub-scale score was not found to be significant ($r = .05$, $p = .43$) and neither was the correlation with the "Advantages of ETDs" sub-scale score ($r = .05$, $p = .45$).

b. The second independent variable examined for relationships with perceptions regarding ETDs was the variable gender. Using independent t-tests, no significant differences were found in either of the two sub-scale scores by categories of the variable gender.

c. The third independent variable examined for relationships with perceptions regarding ETDs was the variable academic rank. The most appropriate statistical procedure was the One Way Analysis of Variance (ANOVA) to compare perception scores by categories of the variable Academic Rank. The

variable academic rank had four levels: Professor, Associate Professor, Assistant Professor and Instructor (only 1 so was eliminated). When each of the sub-scales was compared by categories of academic rank using the one way ANOVA procedure, no significant differences were identified.

d. The fourth independent variable examined for relationships with perceptions regarding ETDs was the variable earned tenure. The most appropriate statistical procedure was to compare the sub-scale scores by categories of the independent variable. Using independent t-tests to perform this, no significant differences were found in either of the two sub-scale scores by categories of the variable gender.

e. The fifth independent variable examined for relationships with perceptions regarding ETDs was the variable number of master students committee chair for at present. the researcher determined that the most appropriate statistical procedure was to use the Pearson Product Moment correlation coefficient. The correlation with the " Problems Associated with ETDs" sub-scale score was not found to be significant ($\underline{r} = -.07$, $\underline{p} = .23$) and neither was the correlation with the "Advantages of ETDs" sub-scale score ($\underline{r} = -.01$, $\underline{p} = .87$).

f. The sixth independent variable examined for relationships with perceptions regarding ETDs was the variable number of doctoral students committee chair for at present. The researcher determined that the most appropriate statistical procedure was to use the Pearson Moment correlation coefficient. The correlation with the " Problems Associated with ETDs" sub-scale score was

not found to be significant (r = .03, p = .63) and neither was the correlation with the "Advantages of ETDs" sub-scale score (r = -.10, p = .08).

g. The seventh independent variable examined for relationships with perceptions regarding ETDs was the variable time spent in an average school semester week doing teaching. The researcher determined that the most appropriate statistical procedure was to use the Pearson Product Moment correlation coefficient. The correlation with the " Problems Associated with ETDs" sub-scale score was not found to be significant (r = -.09, p = .13) and the "Advantages of ETDs" sub-scale score (r = .02, p = .78) was also not found to be significant.

h. The eighth independent variable examined for relationships with perceptions regarding ETDs was the variable years served as graduate advisor for masters and/or doctoral students years. The researcher determined that the most appropriate statistical procedure was to use Pearson Product Moment correlation coefficient. The correlation with the " Problems Associated with ETDs" sub-scale score was not found to be significant (r = -.01, p = .92), nor was the correlation with the "Advantages of ETDs" sub-scale score (r = .09, p = .14).

Conclusions

The following conclusions and implications were derived from the findings of the study for active graduate faculty at a research extensive university:

1. The majority of active graduate faculty are white, male, middle aged and have terminal degrees.

This conclusion is based on the following findings of the study: (1) The majority of the respondents were Caucasian (n = 245, 84.8 %); (2) the majority of the respondents indicated that they were male (n = 237, 82.6 %); (3) the largest group of respondents were in the 46 - 55 year category (n = 114, 39.4 %); and most of the respondents (n = 272, 94.1 %) reported that they had completed a doctorate.

2. The majority of graduate faculty are professors, tenured, and a substantial portion of them hold administrative appointments concurrent with their faculty appointment.

This conclusion is based on the following findings of the study: (1) The majority of the respondents were professors (n = 154, 84.8 %); (2) the majority of the respondents indicated that they were tenured (n = 229 or 80.4 %); (3) graduate school faculty reported that they held administrative appointment concurrent with their faculty appointment (n = 65, 22.5 %).

3. The graduate faculty at this university have distinct and diverse interests and areas of expertise.

This conclusion is based on the findings from the study in which faculty indicated their discipline within their department and college. Most of the study participants (222 of the 289 total respondents) responded to this item and were able to identify a specific discipline in which the primary portion of their academic

appointment was held. These 222 faculty members who responded to this item reported a total of 160 different disciplines. Please see APPENDIX G.

4. On average, the graduate faculty at this university spend the biggest part of their time researching and somewhat less time with teaching activities.

This conclusion is based on returns from the survey that indicate that during the average school semester week the largest mean percent of time spent was in the area of research (mean = 41.4, SD = 20.35). The percent of time spent in research activities ranged from a low of 0 to a high of 100 percent. The overall mean percent of time spent in teaching activities was 36.4 (SD = 18.63) with individual responses ranging from 0 to 100 percent.

This conclusion is further supported by the finding that the largest mean percent of officially assigned faculty time was in the area of research (M = 48.58, SD = 21.18). The second highest percentage of time was assigned to teaching activities (M = 42.83, SD = 21.17) with individual responses ranging from 0 to 100 percent.

5. The majority of graduate faculty have worked for many years in higher education and have worked for many years with masters and doctoral students as their chairs.

This conclusion is based on self-reported demographic information provided from this survey that the average number of years employed as faculty in higher education was 17.0 years, (M = 17.0, SD = 9.81). The least number of years employed was one and the most number of years that a faculty member had been employed in higher education was forty. Faculty had served as a graduate advisor for

masters and/or doctoral students an average of 15.1 (M = 15.1, SD = 9.37) years. The least time was less than a year and the most time was thirty-eight years.

6. Active graduate faculty members are comfortable in using new technology.

This conclusion is based on the following findings of the study: (1) Respondents agreed with the following items in the "Attitudes toward New Technology" scale: I am comfortable with using new technology" (mean = 3,85), and (2) "In general I like to work with new technologies" (mean = 3.81). In addition, they disagreed with the item, "I prefer not to use new technology because it is too complicated" (mean = 1.91).

7. The active graduate faculty in this survey had more positive attitudes regarding the "Personal Issues" of technology than "Institutional Issues."

This conclusion is based upon Personal Issues as Perceived by active Graduate Faculty at a Research Extensive University in Regards to New Technology with a mean = 3.78 (SD = .82), and Institutional Issues as Perceived by active Graduate Faculty at a Research Extensive University in Regards to New Technology with a mean = 3.43 (SD = .65).

8. Active graduate faculty have positive perceptions regarding ETDs.

This conclusion is based on respondents answers to the questions, "ETDs will increase the access of faculty and graduate students to important research literature" (M = 3.87, SD = 1.04) and "The advantages of ETDs outweigh their disadvantages" (M = 3.61, SD = 1.00). Both of these items were classified in the "Agree" category

using the researcher designed interpretive scale. In addition, respondents disagreed with the item "ETDs are just a passing fad" (M = 1.87, SD = .88).

9. Active graduate faculty at this research extensive university have little knowledge of ETDs.

This conclusion is based on "Yes" responses to the question "Have you used the Internet in the last six months to search online databases in your field (Examples Medline, ERIC, PsycINFO?)" More than 90% (n = 260, 90.3%) of the 288 individuals who responded to this item indicated "Yes." But only slightly more than one fifth (n = 58, 20.3 %) indicated that they had seen an ETD. Additionally of the 58 faculty members who indicated that they had seen an ETD only 24 indicated that they had down loaded an ETD, only 21 reported that they had used the reference section of an ETD, and only 13 had searched an ETD library.

10. Active graduate faculty have high levels of expertise in most ETD related softwares.

This conclusion is based on self-reported expertise in using software. The software with which the respondents reported the highest level of expertise was Microsoft Word, with a mean rating of 3.63 (SD = 0.87). They rated themselves as Average Users for Word Perfect (mean rating = 3.27), Microsoft Excel with a mean rating of 3.06 (SD = 1.14), and Adobe Acrobat with a mean rating of 3.04 (SD = .86). In addition 266 (02.7%) indicated "Yes" when asked if they had read a .pdf file and 259 (90.2%) reported that they had printed a .pdf file.

11. The majority of active graduate faculty at this research extensive university believe that graduate students should have the option of granting "World wide, unrestricted access" to their ETD. The least desirable choice would be "Campus wide access only."

This conclusion is based on survey responses indications by faculty for access option that received a "Yes" response by the largest portion of the faculty who answered this item was "World wide, unrestricted access" with the majority (n = 139, 55.2 %) indicating that this should be the premier access option. The access option that received the smallest number of "Yes" responses was "LSU campus-wide access only" with only 21.2% (n = 49) of faculty who answered this item indicating, "Yes."

12. Active graduate faculty at this research extensive university advocated Web Documents and Workshops as the methods for educating graduate students about ETDs. Faculty requested further training for themselves in .pdf.

This conclusion is based on survey reports that the training technique that the largest group of responding graduate faculty members indicated should be used was "Web Documents" with 258 (96.3%) marking "Yes" for this method. The second most identified technique (n = 256, 93.4%) was "Workshops." Additionally, the area identified by the largest number of faculty for their needed training was "Training in the use of .pdf (n = 193, 71.5%).

13. Active faculty at this research extensive university are Supportive of ETDs

This conclusion is based on survey reports. The reaction that received the

highest level of agreement among the respondents was "Supportive" with a mean rating of 3.86 (SD = 0.93). The reaction that received the lowest level of agreement was "Hostile" with a mean rating of 1.80 (SD = 1.10).

14. Most faculty at this research extensive university are active in scholarly productivity.

This conclusion is based on the following findings of the study: (1) Most had published in the last five years in a Journal Article in a Peer Refereed Journal (n = 283, 99.3 %), Conference Paper (n = 243, 88.7%), and over half had written a Book Chapter. (2) Most had served as a "reviewer for a professional journal" and (3) over half had a home page of some type on the Internet. The least frequently reported publication in the past five years was an "Article in an electronic journal" with only 31.1% (n = 79). Additionally, "Have you ever served as a reviewer for a professional journal" was the question and the reply was 272 (94.4 %) "Yes" and 16 (5.6 %) "No."

15. Additional conclusions that were derived from this study are that:

The benefits of ETDs are derived from the fact that they are electronic media and therefore have additional resources over print. They provide future scholars with training, transfer of knowledge which is richer and more expressive than print. Generally speaking they are accessible to many more patrons from any location, they can be immediately available after submission, savings in storage space and processing costs, have greater search ability and access points, include new technologies such as multimedia, and above all from a higher education point of view,

they educate graduate students in using electronic technologies in scholarly publications.

The problems with ETDs for faculty involves: how ready are they, publication possibilities, intellectual property problems, restrictions to the documents, equipment availability both soft and hard, archiving and preservation including infrastructure, and orientation and training problems. In general, faculty prefers informal training methods. They prefer one on one training rather than group training.

As a result of this study, active graduate faculty at a research extensive university have provided the following conclusions. 1. Perceptions of active graduate faculty are very important to the implementation of a new technological process. 2. In considering designing an instrument for group perceptions, one must consider that over all perceptions vary from "group think" as compared with individual perceptions. 3. Individual items in an instrument can result in different perceptions/interpretations by graduate faculty depending on their greater immediate external environment. For example, how administrators treat their graduate faculty both individually and as a group.

Recommendations

The study should be repeated in two years, Fall 2003, after faculty and graduate students have adjusted to working with and submitting their works electronically for access. But one should consider in this new survey adding to the survey to include all graduate faculty who had mentored/chaired graduate students in 8000 and 9000 courses in the last two years. Repeat the study is for the purpose of

understanding how their perceptions have varied; changed; and to plan for future accommodations.

One recommendation for practice would be that a technology person be hired to run workshops and to have individual training for faculty. Several respondents stated that faculty were uncomfortable learning in groups and that they preferred the comforts of their offices to allow technology people to drop in on them and give them lessons in .pdf for example. In addition they felt that workshops and an open door at any time lab would be a good idea for graduate students working on their ETD to seek aid from instead of having to work on their own in created their ETD.

The open end question and the margin comments were especially useful to the researcher in receiving added useful information on adjustments; added IT needs; and in service training needed in the future and as a way to understand what adjustments, for what ever reason, had already been made to accommodate both graduate students and graduate faculty in adopting this additional innovative process prior to the student graduating. This survey established the "state of readiness" that the active graduate faculty had established for themselves.

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APPENDIX A

PERMISSION LETTER

From:fox@vt.edu on 06/10/2002 01:32 PM AST

Sent by: fox@vt.edu

To:
ugoldsm@lsu.edu
cc:
fox@vt.edu
Subject:
RE: request for permission correction - granted for NDLTD pages

Ursula Goldsmith
SHREWD
Louisiana State University
Baton Rouge, LA 70893

Dear Ms. Goldsmith:

I hereby grant permission for you to include reproductions of the requested web pages, or other forms based on them, in paper, microform and electronic versions of your dissertation, as long as you give due credit through a proper citation. The pages mentioned were prepared by Laura Weiss under my directions as part of her paid work assisting in the development of the NDLTD.

Thank you for your interest and scholarship!

Sincerely

Edward A. Fox, Professor (and Director, NDLTD)
Dept. of CS, 660 McBryde Hall
Virginia Tech, M/C 0106, Blacksburg, VA 24061 USA
Ph: +1-540-231-5113, FAX +1-540-231-6075
Mobile: +1-540-2306266; fox@vt.edu; http://fox.cs.vt.edu

-----Original Message-----
From: Ursula Irene A Goldsmith [mailto:ugoldsm@lsu.edu]
Sent: Monday, June 10, 2002 12:01 PM
To: Fox, Edward
Subject: request for permission correction

April 10, 2002

Subject: Request for permission

Edward Fox
Director NDLTL
fox@vt.edu
Virginia Tech
Blacksburg, Va

Dear Sir,

As I finish my dissertation, "Perceptions of Active Graduate Faculty at a Research Extensive University Regarding Electronic Submission of Thesis and Dissertations (ETDs)," I am requesting permission to capture and reproduce web pages from the your Internet web site: Parts of an ETD by LEW '96 a ETD document divisions graphic: (http://www.ndltd.org/~etd/images/etdparts.jpg) and Life Cycle of an ETD by LEW '96 and BFS '97 (http://www.ndltd.org/~etd/images/lifecycle.jpg).

I am a doctoral candidate in SHREWD (Vocational Education, also known as the School of Human Resource Education and Workforce Development) at Louisiana State University. My dissertation will not be a published document, though University Microfilms International (UMI, Bell & Bell Information and Learning) will supply single copies on demand as it does for most dissertations completed at American universities.

Your cooperation will be greatly appreciated.

Sincerely,

Ursula Goldsmith
SHREWD
Louisiana State University
Baton Rouge, LA 70893
Phone: (225) 761-8471
Email: ugoldsm@lsu.edu

APPENDIX B

COVER LETTER

The School of Human Resource Education
and Workforce Development
Old Forestry Building
Louisiana State University
Baton Rouge, Louisiana 70893

January 10, 2002

Dear Professor:

LSU has made the decision to fully implement the use of electronic submissions of theses and dissertations beginning with the spring semester, 2002. The success of this innovation will be greatly influenced by the perceptions and attitudes of the faculty who supervise graduate students. The purpose of this study is to determine the perceptions of graduate advisors regarding the implementation of Electronic Thesis and Dissertations (ETDs). You have been selected to participate in this study based on the fact that you were chair of a committee for masters or/and doctoral students during the fall semester of 2001.

Your participation in this study will be greatly appreciated. Responses to the survey are completely anonymous. As I am collecting aggregate data, you will not be identified personally except for the purpose of verifying that you have received the survey.

The survey should take approximately 12 minutes to complete. Please return it to me in the first class mail envelope you received with the survey.

Thank you in advance for your efforts to address this important issue. Since you are one of a select few every survey counts. Best wishes for a productive and rewarding spring semester.

Sincerely,

Ursula Goldsmith
ugoldsm@lsu.edu

APPENDIX C

FOLLOW UP LETTER

The School of Human Resource Education
and Workforce Development
Old Forestry Building
Louisiana State University
Baton Rouge, Louisiana 70893

January 18, 2002

Dear Professor:

On Janurary 14, 2002, you were sent a survey from me with the topic of ETDs (Electronic theses and Dissertations).

LSU has made the decision to fully implement the use of electronic submissions of theses and dissertations beginning with the spring semester, 2002. The success of this innovation will be greatly influenced by the perceptions and attitudes of the faculty who supervise graduate students. The purpose of this study is to determine the perceptions of graduate advisors regarding the implementation of Electronic Thesis and Dissertations (ETDs). You have been selected to participate in this study based on the fact that you were chair of a committee for masters or/and doctoral students during the fall semester of 2001.

Since you are one of a select few every survey counts. I look forward to receiving your survey so that we may have your needed input.

Sincerely,

Ursula Goldsmith
ugoldsm@lsu.edu

APPENDIX D

FOLLOW UP E-MAIL

Professor's Name
Subject: Friendly Reminder

On January 14, I sent a survey concerning Technology and ETDs. Until now, I have not heard from you?

It is important that your input be part of my aggregate study.

If you did not receive a survey please leave an e-mail message for me at ugoldsm@lsu.edu.

Thank you in advance and have a nice day!

APPENDIX E

ELECTRONIC THESES AND DISSERTATIONS (ETDs) SURVEY

Part 1a: Perceptions About New Technologies

The following statements are about your perceptions of using new technologies in your teaching and research. New technologies include multimedia computers, Internet, and other digital media. Please indicate the extent to which you agree and disagree with each statement:

Scale: 1=strongly disagree, 2=disagree, 3=not sure, 4=agree, and 5=strongly agree

1.	I consider myself an "early adopter"of new technology.	1	2	3	4	5
2.	In general, I like to work with new technologies.	1	2	3	4	5
3.	New technology will not improve learning.	1	2	3	4	5
4.	I prefer not to use new technology because it is too complicated.	1	2	3	4	5
5.	I am comfortable in using new technology.	1	2	3	4	5
6.	Support and help with new technology is readily available when I need it.	1	2	3	4	5
7.	I have adequate technological resources now.	1	2	3	4	5
8.	The new technologies interfere with teaching and learning.	1	2	3	4	5
9.	I am reluctant to adopt new technology because I do not know enough about using them.	1	2	3	4	5
10.	New technologies make little difference in the way people learn and think.	1	2	3	4	5

Part 1b: General Perceptions About ETDs

Please indicate your level of agreement/disagreement with each of the following items related to Electronic Theses and Dissertations (ETDs) by circling the most appropriate response on the scale provided. The term ETD refers to a master's thesis or doctoral dissertation that is archived electronically.
Scale: 1=strongly disagree, 2=disagree, 3=no opinion, 4=agree, and 5=strongly agree

11.	ETDs will increase the access of faculty and graduate students to important research literature.	1	2	3	4	5
12.	ETDs will interfere with my ability to effectively advise my graduate students.	1	2	3	4	5
13.	Graduate students will need extensive training to submit their theses/dissertation electronically.	1	2	3	4	5
14.	ETDs are just a passing fad.	1	2	3	4	5
15.	This university is ready for ETDs.	1	2	3	4	5
16.	I have apprehensions about requiring electronic submission of theses and dissertations.	1	2	3	4	5
17.	The university will improve its ability to recruit top quality graduate students by requiring electronic submission of theses and dissertations.	1	2	3	4	5
18.	Many currently enrolled graduate students will drop out due to the ETD requirements.	1	2	3	4	5
19.	Access to computer hardware will be a significant problem for graduate students in electronically submission of theses and dissertations.	1	2	3	4	5
20.	Intellectual property rights will be a significant problem in electronic submission of theses/ dissertations.	1	2	3	4	5
21.	The advantages of ETDs outweigh their disadvantages.	1	2	3	4	5

22. Faculty graduate advising loads should be reduced to accommodate the increased time requirements associated with ETDs. 1 2 3 4 5

23. Adoption of ETDs for submission of theses and dissertations will benefit my career. 1 2 3 4 5

Part 2: ETDs as Scholarly Format

24. Have you used the Internet in the last six months to search online databases in your field (Examples Medline, ERIC, PsycINFO)? _____ Yes _____ No

25. Have you ever seen an ETD? _____ Yes _____ No
(If no, please skip to question 30. If yes, please continue with question 26).

26. Approximately how many ETDs have you consulted in the last month? _____

27. Have you ever downloaded an ETD? _____ Yes _____ No

28. Have you ever used the reference section of an ETD?
_____ Yes _____ No

29. Have you ever searched any of the ETD Libraries? _____ Yes _____ No

30. For each of the software programs listed below, please indicate your level of expertise in the program.

Scale is 1 = Never heard of it, 2 = Novice user, 3 = Average user, 4 = Advanced user, and 5 = Expert user.

Adobe Acrobat	1	2	3	4	5
Microsoft Word	1	2	3	4	5
Word Perfect	1	2	3	4	5
HTML Editors	1	2	3	4	5
Microsoft Excel	1	2	3	4	5
Microsoft Access	1	2	3	4	5
Adobe Photoshop	1	2	3	4	5
Macromedia	1	2	3	4	5

31. Have you ever:

Read a .pdf file?	_____ Yes	_____ No
Printed a .pdf file?	_____ Yes	_____ No
Created a .pdf file?	_____ Yes	_____ No

32. Which of the following access options should be part of the LSU access policy for ETDs?

The author (student) should be able to specify the access granted	_____ Yes	_____ No
World wide, unrestricted access	_____ Yes	_____ No
Unrestricted access granted after one year	_____ Yes	_____ No
Access granted to certain portions only (for example only to the abstract)	_____ Yes	_____ No
LSU campus-wide access only	_____ Yes	_____ No

33. How do you think graduate students should be educated about ETDs at the university? (please check all that apply)

Web Documents	_____ Yes	_____ No
Workshops	_____ Yes	_____ No
Brochures	_____ Yes	_____ No
Course Content	_____ Yes	_____ No

Other (please specify) _____

34. In order to successfully advise a graduate student to the completion of a electronic thesis or dissertation, a faculty member needs:

Training in the use of .pdf?	_____ Yes	_____ No
Training about the revised graduate school dissertation submission requirements?	_____ Yes	_____ No
Training in the use of word processing?	_____ Yes	_____ No

35. Listed below are several psychological reactions to the conversion to electronic submissions of theses and dissertations. Please rate each item as to your level of agreement that accurately reflects your attitude toward ETDs (The scale includes: 1=strongly disagree, 2=disagree, 3=not sure,4=agree, and 5=strongly agree).

How do you feel about ETDs as a concept?

Hostile	1	2	3	4	5
Resistant	1	2	3	4	5
Uncertain	1	2	3	4	5
Supportive	1	2	3	4	5
Intrigued	1	2	3	4	5

Part 3: PUBLISHING

36. What works of your own have been published in the last five years?

Journal Article in a Peer Refereed Journal	_____ Yes	_____ No
Book	_____ Yes	_____ No
Book Chapter	_____ Yes	_____ No
Conference Paper	_____ Yes	_____ No
Article in an electronic journal	_____ Yes	_____ No

37. Do you have a home page on the Internet? _____ Yes _____ No

38. Have you ever served as the editor of a professional research journal?
_____ Yes _____ No

39. Have you ever served as a reviewer for a professional journal?
_____ Yes _____ No

40. Do you think that a dissertation or thesis is a published work?
_____ Yes _____ No

41. Do you think that a dissertation or thesis is a peer-reviewed work?
_____ Yes _____ No

Part 4: DEMOGRAPHIC INFORMATION

1. Age at your last birthday?
_____ 35 or less
_____ 36 - 45
_____ 46 - 55
_____ 56 – 65
_____ 66 and over

2. Gender? _____ Female _____ Male

3. Ethnic group? _____ Asian _____ Black _____ Caucasian
_____ Hispanic _____ Native American _____
Other (please specify)

4. Highest level of education completed?
_____ Baccalaureate degree _____ Master's degree
_____ Doctoral degree _____ Other (please specify)

5. What is your academic rank:
_____ Professor _____ Associate Professor
_____ Assistant Professor _____ Instructor

6. Are you tenured in your current position? _____ Yes _____ No

7. Please identify the following information regarding the primary portion of your academic appointment.
College _____
Department/ School _____
Discipline (within department) _____

8. Do you hold an administrative appointment concurrent with your faculty appointment? _____ Yes _____ No

If yes, please indicate your title:
_____ department chair
_____ college/school dean
_____ coordinator of graduate programs
_____ assistant or associate dean
_____ other _____ (please specify)

9. How many masters' thesis students' committees are you currently chairing (include December, 2001 graduates)? _____

10. How many doctoral dissertation students' committees are you currently chairing (include December, 2001 graduates)? _____

11. In a typical week during the semester, approximately what percent of your time is spent in each of the following activities?

Teaching (including graduate advising)	_____ %
Research (including funded and unfunded research)	_____ %
Administration	_____ %
Service	_____ %
Other (please specify)	_____ %

_____

12. Number of credit hours you are teaching this semester? _____

13. Number of courses you are teaching this semester? _____

14. Please tell me your official university assignment hours percentages?

Teaching (including graduate advising)	_____ %
Research	_____ %
Administration	_____ %
Service	_____ %
Other (please specify)	_____ %

_____

15. Approximately how many hours do you spend in a typical week directing the research of <u>each</u> of your masters theses students? _____

16. Approximately how many hours do you spend in a typical week directing the research of <u>each</u> of your doctoral dissertation students? _____

17. How many years have you been employed as a faculty member in higher education? _____

18. How many of your years in higher education have you served as graduate advisor for masters and/or doctoral students? _____

THANK YOU!

Your comments have been very helpful: you told us what you like and what you do not, you provided us with a lot of good ideas, and you told us what you would like our priorities to be. We will do our best to implement many of your suggestions.

19. Please use the space below for any comments or questions you have about ETDs.

Please also tell us about any other special software that you use.

APPENDIX F

SELECT ANSWERS TO SURVEY QUESTIONS OTHER THAN QUESTION 19

Part 1a: Perceptions About New Technologies

4. I prefer not to use new technology because it is too complicated.

285 In some cases
534 I've been stung by technology that seldom works

5. I am comfortable in using new technology.

385 Except cell phones!

6. Support and help with new technology is readily available when I need it.

47 It varies

8. The new technologies interfere with teaching and learning.

186 They can interfere is poor quality or inadequate support.
396 They can but they need not
534 Harvard study shows power point bullets less effective for retention than simple narrative.

Part 1b: General Perceptions About ETDs

11. ETDs will increase the access of faculty and graduate students to important research literature.

28 I work far more than 40 hrs (per) wk
100 Filling out forms such as this and similar odd things that force their way onto my desk
543 Instructions – needs to be not sure

12. ETDs will interfere with my ability to effectively advise my graduate students.

128 But I have large classes! I.e. 130 students

14. ETDs are just a passing fad.

100 Doesn't know

534 No, unfortunately. We are obsessed with technology

15. This university is ready for ETDs.

70 It should (be)!

18. Many currently enrolled graduate students will drop out due to the ETD requirements.

254 We don't want ones that would drop out for that reason.
534 No, they have no alternative to this Massilairy coercion

20. Intellectual property rights will be a significant problem in electronic submission of theses/ dissertations.

72 They may make it easier to be reviewed by their committees

22. Faculty graduate advising loads should be reduced to accommodate the increased time requirements associated with ETDs.

70 Faculty work load is already unreasonably high.
603 Cross out reduced and wrote in "compensated; reduction is <u>not</u> an option.

23. Adoption of ETDs for submission of theses and dissertations will benefit my career.

70 My career is less important than what is good for students and science.

Part 2: ETDs as Scholarly Format

25. Have you ever seen an ETD?

413 Depends

27. Have you ever downloaded an ETD?

70 Only partly – the files are too big.

30. For each of the software programs listed below, please indicate your level of expertise in the program.

Adobe Acrobat

4 Never used it

6 Never used it

Word Perfect

77 Wordperfect – Nonuser but I've heard of it

HTML Editors
Microsoft Excel
Microsoft Access
Adobe Photoshop
Macromedia

General comments on software

85 Word Perfect, HTML Editors,Microsoft Access, and Adobe Photoshop - "heard of it but don't (doesn't) know how to use it"
160 Don't use Adobe Photoshop and Macromedia
225 Heard of but never used
285 Some I do not use at school but at home Word Perfect, HTML Editors, Microsoft Access, and Adobe Photoshop
355 I use Quattro pro
413 Non-User
602 What product?
421 Added TEX {MACS}
466 Macromedia – never used it

31. Have you ever:
Read a .pdf file?
Printed a .pdf file?
Created a .pdf file?

137 Only once
226 As you don't define it I'm not sure what it is
504 I don't know, maybe once

32. Which of the following access options should be part of the LSU access policy for ETDs?
The author (student) should be able to
specify the access granted
World wide, unrestricted access
Unrestricted access granted after one year
Access granted to certain portions only
(for example only to the abstract)
LSU campus-wide access only

504 The same as in the library, please
226 Changed to granted after 3 years
274 No idea. Need discussion with faculty in department and college to have an informed opinion.
77 World wide – the above answers are context – dependents on field
467 Depends on how copy rights are handled. Generally I recommend worldwide unrestricted access.
28 Depends on if it is thesis/dissertation advisor's project
42 Yes for author, rest?
69 Besides the point … students should Publish
104 Choices should be available to author and advisor
121 It depends on the presence of instructors property!
131 For the first year restricted before unrestricted is granted.
170 Not sure
186 First no access until after a year, then unrestricted. This question is confusing.
191 Intellectual copyrights problem
219 This is a poorly formed series of questions.
372 A student should be able to withhold access for a reasonable time (less than 5 years) to permit publication)
413 Sell access

33. How do you think graduate students should be educated about ETDs at the university? (please check all that apply)

Web Documents
Workshops
Brochures
Course Content
Other (please specify)

180 Educate professor also
366 Available help desk
160 Short course
55 Will LSU actually do this?
434 Training by the department.
70 Help desk
420 I am thinking about composers of music
82 Educate advisors
97 I think that after a few years new student (s) will learn from older students
104 Workshops (No one will show up)
285 Other meeting with dept faculty, staff, and grad students

310 Training sessions at Frey
428 At support sites. Brown bag luncheon where students can share what they have learned.
436 Just print out instructions for exactly how to make .pdf files (and)
give (it) to all incoming students.
470 Science students pick this stuff up as they go along
466 Other – My students do all of this work in formats that are easily
assembled as an ETD; they learn it as they go during their graduate work.
276 Theses secretary for every department who deal with manuscripts.

34. In order to successfully advise a graduate student to the completion of a electronic thesis or dissertation, a faculty member needs:
Training in the use of .pdf?
Training about the revised graduate school dissertation submission requirements?
Training in the use of word processing?

467 Surely most competent faculty already have this "training"! So it is not needed.
603 (Training of Faculty) –"It's not our job".
422 Me, the dept, other depts. ???
104 Most already know this, right?
82 I suppose but this is really easy to initiate? Just tell them
47 And software!!! (Training in software)
325 I have no idea
121 (Training in pdf) Maybe
150 In this case, web documents and brochures (same as for grad students above (this) would be sufficient "training")
154 It's up to the student and to the unit that made ETD the law!
208 This should be up to the student.
225 Someone else should do it
297 No, faculty should not be forced.
300 Graphics are the hard part not text
311 Make submission easy – so students don't need to earn a degree in ETD submission knowledge of or training in use of .pdf or word processing
341 Not directly the responsibility of the faculty member
359 Students can figure it out
503 The student does!

35. Listed below are several psychological reactions to the conversion to electronic submissions of theses and dissertations. Please rate each item as to your level of agreement that accurately reflects your attitude toward ETDs (The scale includes: 1=strongly disagree, 2=disagree, 3=not sure,4=agree, and 5=strongly agree).

How do you feel about ETDs as a concept?

Hostile
Resistant
Uncertain
Supportive
Intrigued

69 It's just not a big deal, + or -
55 Who thought up this format?!?
82 (Intrigued) This is not intriguing, just obvious.
242 I am not hostile.
28 Articles (print) as well

Part 3: PUBLISHING

37. Do you have a home page on the Internet?

341 Via the dept - yes

38. Have you ever served as the editor of a professional research journal?

341 As associate editor – yes and guest editor – yes
334 Associate Editor
246 Assistant Editor

40. Do you think that a dissertation or thesis is a published work?

85 No – emphatically
150 I think that a dissertation is a published work; however, I do not think that a thesis is a published work.
251 No, although it may be officially
446 Not unless already accepted repro in journals
251 No absolutely <u>not</u>

41. Do you think that a dissertation or thesis is a peer-reviewed work?

150 I think that a dissertation is a peer-reviewed work; however, I do not think that a thesis is

28 In a way by the committee
69 No, not at LSU
42 Yes, some times
208 Internally
340 Yes, maybe

General Comments

55 Think it's a good idea but wonder if its another play to save library money
like electronic journals
69 Part 1 – Answers are technology specific (there are good and bad, not just new and old)
297 Part 1a The computer is a great tool to make work faster and to search for information. Too many use it as a replacement for critical thinking.
Therefore my negativeness. ETD(s) are good for storage and preservation of data.

APPENDIX G

SELECT ANSWERS TO SURVEY QUESTION 19

I LIKE ETDS

433 (ETDs) Do it. Time to hop into the 21th Century.

47 Go for it – Make it clear, consistent and easy.

81 I think ETDs are great.

163 Think they are extremely important and must be done.

82 This is obvious. Just do it. You still should have a printed version.

240 (It) should make things easier for student(s) to meet requirements of format, etc. (It) will help transfer technology to others.

256 I have not yet used ETD submission, so I'll withhold judgment. However, I think it's an idea whose time has come.

267 I know very little about the submission of electronic theses, but it makes all the sense in the world to me. Otherwise, we will eventually run out of space to store paper documents. It will make theses much more available world-wide.

346 Only concerns are with copyright and plagiarism. Utilities abound for converting .pdfs back to word process(ing) documents – even locked .pdfs. However, we need to do this and should have started doing it several years ago, already.

468 It's about time …!

STUDENT PREPARATION OF ETDS

84 For a student, preparing an ETD is a nearly trivial extension of discuss and preparation. Their theses are already in various electronic formats. It's no big deal

to generate the necessary PDF.

483 New technology can be helpful for teaching. Learning, however, is something the student does and is responsible for. No technology can compel the reluctant learner to learn. Technology can improve the quality of instruction but the learner must still work and study. This is particularly true for the data intensive disciplines such as the sciences. When push comes to shove, the science student simply must memorize a lot of facts before a useful synthesis of information (can) be attempted, all the movie approaches to education not withstanding, the one technology that hasn't changed much is the one require(ment) to record information on the brain – study

ETDS AS FORMAT

56 I think of ETDs as a major source of convenience (no need to access these references through the various dissertation services (expensive) or through inter-library loan). Creating the documents is trivial using standard PDF software. No student would drop out to avoid this. That's crazy!

432 I am very supportive of ETDs. However: File size for a document with many publication quality illustrations may exceed the computing capacity available to some/many students. Figures must be high quality for ETDs to be useful and access to training/fast machines must be provided by LSU if ETDs are required. This is my only reservation. Also: LSU wide access is a good idea. Supplemented by access through inter library loan for full versions of ETDs.

300 I am very concerned about:

The amount of time students will spend creating an ETD as opposed to thinking about their research. Not to mention the additional stress.

60 I think of ETDs as a major source of convenience (no need to access these references through the various dissertation services (expensive) or through inter-library loan).

Creating the documents is trivial using standard PDF software. No student would drop out to avoid this. That's crazy!

375 I'm enthusiastic about having ETDs in addition to hard copies in the library. I'm less enthusiastic about having ETDs completely replace the hard copies in the library.

STORAGE AND PRESERVATION OF ETDS

311 The most important concern that I have with ETDs was not even address(ed) in this survey. And that is long-term storage of data and data access. How stable is the storage media that the ETD will be deposited on? What about machines need to read the media – will they be obsolete in 10, 20, (or) 30 years? Who will pay for the storage up keep? Will additional overhead charges be tacked on to research dollars to pay for it? (I am sure it won't come from the athletic dept). Also, who wants to sit in front of a screen to read a Thesis or Dissertation that may be hundreds of pages long? Not many people. So the user will have to pay to print a copy. (Essentially, library storage costs for hand copy ETDs are being transferred to readers as print charges). True, electronic searching of the ETD's content will be an advantage, and a big one at that.

299 My major concern about ETDs is the robustness of the storage media and the "readability of the media" after even a short period of time.

300 I am very concerned about: Long term storage of ETDs. CDs don't last forever.

55 I am not against technology but just worry that this is another cost saving mechanism rather than legitimate improvement. For example, the library is going to electronic journals (Although they won't admit it) because its cheaper. Can you guarantee access to all these files to all students? Will you provide staff/$ to maintain database?

376 The preservation of ETDs will be a significant (problem).

pdf is a recently originated format; there is no guarantee that it will be readable 10 to 20 years from now.

We also need backups of all their files – I do not trust librarians in this area. See the impressive evidence gathered in Nicholson Bakers' Double Fold.

Dissertations are NOT peer-reviewed works that have been brought to formal publication at least not by today's standards.

318 The problem with ETDs is PRESERVATION.

The current LSU proposal assumes that "of course" electronic texts will be maintained in readable form as the media hardware (software!) change. Anyone who has been active with computing over the last 30 years knows this is a questionable assumption, especially given LSU's recurring problems with budgets. Even the computer people admit this is a problem.

Acid free paper is a proven technology for preservation with well over 500 years of success.

One of LSU's missions is the Preservation of Knowledge and, I would hope, the record of the intellectual achievements of its students. The current proposal, by

dispensing with a proven method of preservation (the paper copies and microfilm) violates that mission because it cannot guarantee preservation (barring Acts of God or a disaster in the library).

Preservation

is the real issue; ETDs are fine where dissemination is a priority (as in many science fields) but it is not a substitute for a paper copy as the means of preservation!

PS: I spoke against this ETD idea when (the) chair of the Graduate Council both because of the issue of preservation (copyright and what constitutes publication are also issues) and because this idea is being pushed as an experiment in distributed databases by the VPI group.

We gain little; we endanger a lot by joining them. If this is such a great idea, where are the Ivy League Schools in the list of participants???

DEPARTMENT HARD COPY?

533 I still miss the preparation and submission of a beautifully prepared dissert(ation). I hope we shall return to it.

44 My main apprehension concerning ETD is that they will replace hard copy. If the electronic version was(is) required in addition to the hardcopy, I would not object to the idea.

310 I teach in Geology and Geophysics which had decided to require submission of a hard copy to the department. This guarantees that students can't take advantage of some of the benefits of digital dissertations such as lots of color pictures or video. LSU needs to address this issue across the board, i.e., if it is good enough for the

university, should hard copy still have to be done?

I suspect Geology will accept hard copy with illustrations so long as they are not virtually inconveniencing current students who want to go digital.

TEMPLATES FOR ETDS

2 I hope templates will be provided to help students meet style guidelines (word, wordperfect, etc.)

BUGS IN THE SYSTEM

52 Significant delay in submitting the completed work due to "bugs" in the computer system. It was resolved.

31 A problem with a switch to ETD is access to high quality scanneds (for illustrations and photographs) for students and faculty. We (students and faculty) also uniformly need high quality and fast printers.

93 My last Ph.D. student had an ETD and had a lot of electron micrographs. When they were converted to .pdf, the image quality was extremely poor. I hope this will be corrected for in the near future.

477 Software is problematic. Word isn't suitable as a thesis or scientific paper, at least in the forms I have seen. LaTex is still too hard to use, although a good editor helps a lot. Figures are still a problem. We need a LaTex teacher to teach and set it up and also to find and teach the quick and easy ways to do things.

THE GRADUATE SCHOOL

407 Electronic submission of theses and Dissertations is a good idea for implementation by LSU Graduate School. I am glad it was done.

56 The Graduate School needs to do a better job communicating this to faculty and students. The only notice about this (appeared) on the LSU webpage as a note on PAWS. It does not appear on LSU A to Z or even on the Graduate School page. My student has been frustrated with the lack of information and cooperation from the Graduate School on this.

137 I have been impressed with the way in which the Graduate School has introduced ETDs. My department was selected (asked if it would volunteer) for converting to ETDs in Fall 2001 semester. I asked our faculty for their reaction to the request before agreeing to it. 100% of the faculty supported the idea of our converting to ETDs. I attended one of the training sessions the Graduate School held for ETDs. It was very instructive. Not one student or faculty member complained during Fall 2001 semester about ETDs. In fact, several commented about how it simplified the submission process.

307 Support, support, support!!! The key to the program's success. Most "electronic" innovations are installed at LSU without adequate support for the faculty.

ADMINISTRATION

413 The problem with ETDs will be the same as with other moves executed by fiat from the administration – inadequate support and poor planning of the implementation. Faculty are required to react and bear the burden of implementing decisions at the ground level.

476 ETDs are a good idea, but be aware that, across campus, you will have a very widely varying experience. One size will not fit all. This Survey suggests you do not appreciate this fact yet. BE VERY FLEXIBLE.

414 The ETD concept is not a bad one. It all depends on how it is implemented. If the burden is shifted to the students and faculty, then it is a bad idea. If detailed templates will be available for formatting and submitting with the least amount of effort or "education", then ETD would be very good indeed. My principal reservation stems from the inability of LSU to implement properly "new" technologies. By the time they are introduced at LSU they are no longer new.

603 I have no problems with the idea of ETDs.

Since we are not compensated in any way for directing theses/dissertations, I am reluctant to support a process that requires more time and energy from me. In other words, if the ETD training and supervision are handled by folks paid to train and supervise, "cool". If not, forget it.

455 Request that a copy of a final document (be) prepared using the results of this survey be sent to all those participating in it. Thanks

TRAINING AND HELP WHEN YOU NEED IT

366 The only problems I for see are:

1. Adequate training for both student and faculty. We usually forget this part of the equation.
2. Adequate help – help desk, telephone, or hands on location as specific questions arise. No matter what there will always be some technical questions that need an expert to answer.

428 There is a real need for a user-friendly support of faculty at LSU where faculty and students can explore applications of electronic text, figures, and images. This

need is not being filled on a campus wide basis.

532 I don't understand how ETDs would need to be prepared. It sound like you would intend PDFs, I don't know how difficult it would be to create these from WordPerfect or Word. However, it is relatively easy and straight forward, these should be no problem. Students should get formal instruction and assistance from other than faculty. I haven't really thought about the risks of people stealing theses and dissertations from the author or publish the material elsewhere. That could be a larger problem than I have supposed. In general, accessibility and propagation of ideas are main goals. If ETDs facilitate that, then, bring them on.

GUIDELINES NEEDED

186 My students are very confused and haven't been able to find proper guidelines. I have been provided no guidelines by the university.

94 ETD's are great and a necessity…but this first semester at LSU, almost no one was available to assist in the process, leaving students without adequate guidelines and direction. Let's hope by the fall 2002, that the Graduate School has programs and instructions ready.

285 I am very concerned that we've moved to ETDs with little or no preparation of faculty or staff. I have received no communications that cover or the procedures, specifications, requirements, etc. Nor do I know if I have the technical capacity to handle ETDs.

My great fear is that we adopt one technology only to discover its problems and difficulties and necessities to abandon and the adoption of new technologies. This

has been the "usual course of events to work with the LSU Library, eng.

INTELLECTUAL PROPERTY

104 I (as a faculty member) would like more control over the options that the student may be allowed to choose for intellectual property interests.

171 There are many topics covered in this survey about which I am not conversant – i.e. Copyright concerns, technological difficulties, etc. Thus my replies are guesses more than opinions or convictions.

267 I don't see how intellectual property rights issues would be any different than for paper copies.

240 How about copyright violations? (loss of intellectual property)

341 I'm not reluctant about it at all, but it is the student's hurdle – not mine. It's a technical/clerical sort of thing and I don't involve myself too much in that part. My only area of concern has to do with intellectual property issues – this is likely to be a cloudy matter for some time.

PUBLICATION

69 Publications in peer reviewed journals is what matters – ETD's are just a minor distribution – they should be good practice for students who must eventually submit grant proposals electronically, but no savvy student will see them, big deal.

243 Students, especially PhD students, must be encouraged to write up their results results in the form of referred journal manuscripts; and these should be submitted as soon as the research is completed. This will allow many publications to be in print

at the time of graduation, and will greatly facilitate more competent employment.

For this procedure to work, the advisory committee must be involved in all in-house reviews of manuscripts prior to submission.

A major impediment to further competitiveness of students after graduation is the fact that many academic areas of the university often do not encourage research initiation until after general examination (PhD) and completion of coursework. In this situation, the quality and comprehensiveness of the research will be that of a student.

Proper submission of the electronic document should be the responsibility of the graduate student, just as it is now for paper submissions. No big deal. Just give them the specs (specifications), and that's how it will have to be submitted.

70 I am in support of ETDs but:

1. They need to be published in a publication like format (e.g., double – column, pleasing font, good margins, well formatted pages, etc.) and not in a manuscript format.
2. This may be also the point in these when LSU may want to require that at least dissertations are reviewed by outside reviewers.

128 Some journals – Chemistry ones may have problems of electronic publishing of dissertations.

131 ETDs are a good idea. Student may need a chance to publish articles from their work before granting availability. I like the idea of giving the student the choice of allowing immediate or delayed (up to 1 year) access to full ETD. But have all abstracts go on line right away, and allowing worldwide access.

85 The vulnerability and fragility of electronic "publications" is an area of concern. Of course hard-copy is vulnerable to fire, etc., but I suspect we have a lot to learn concerning the vulnerability of electronic material (from sabotage, terrorism, etc.)

ACCESS

80 Unrestricted access could be granted by the advisor after a certain time, but this period may need to be extended for up to, for example, five years, depending how long it takes to publish and unpublished results remaining in the dissertation/thesis.

Unrestricted access could be granted anytime within this period or could automatically be granted after the upper limit (ie. five years) has expired.

300 I am very concerned about: Other than online access, what are the advantages? I don't see any. I have no confidence that the people who pushed this through behind the faculty's back know what they are doing or have really thought this out.

SOFTWARE

300 I am very concerned about:

1. Importing of graphics/ animations

490 It is difficult to answer many of the questions about ETDs without knowing more about the procedures and requirements entailed (with) the submission process. For example – few of us (none in my department) have the capacity to transfer or produce documents in **.pdf** format. Will the University provide that software (?) Obviously, and related, if we do not have the software, we know little about the operation and or its usefulness.

436 I can not imagine creating a .pdf file should be an impediment for graduation.

419 Should model after NSF fastlane for proposal submission.

422 I'm curious about inclusion of musical examples in ETDs

187 No problem for engineering students could be very significant burden for liberal arts students. An unnecessary obstruction.

188 TEX TEXT Formating for MAT(?) (and) EMAC TEXT Editor

97 **Latex** is used for word processing by a lot of people in my field. It is excellent, far better than word and wordperfect, and all of my students have used it! It needs to be made available to all students or at the very least to graduate students in Science and Engineering.

107 The ability to use **LATEX** (typesetting program) will be essential for many of the Math/Science/Engineering students

119 We need better support on this campus for **Front Page**. I mean more Front Page enabled servers on which students and faculty can develop sites.

342 "**Origin**", one of the best, is the best for plotting results with graphics.

403 I am against strict "Micro Soft" requirements. E.g. students should not be required to use MS Word.

Submission of .pdf documents is acceptable.

42 **Power Point**

578 Main software packages that I use:

Sigma Plot – scientific graphics

SAS - statistical software

ProCite – bibliographic software

Microsoft Office

MANDATORY USE OF COMPUTERS

361 (I) have reservations due to the time required at the computer.

119 All of the computer developments are neutral insofar as learning goes. It is just a matter of convenience. I take it back – computer "enhanced" learning has potential to be a negative influence (very little potential for positive influence). To be a negative influence (very little potential for positive influence). Even so, the convenience out weights the risk. And it is inevitable.

154 I see no real way at the present that ETDs will enhance the quality of a Master's thesis or of a doctoral thesis. In fact, I cannot see how it would ever improve on the investigative efforts of thesis or dissertation research.

THE OLD WAY IS WHAT I KNOW

227 It seems like another LSU special: new requirements without support, or any lessening of other requirements comparatively limited. With electronic submission of referred journal manuscripts, the value of ETDs will be substantially limited. ETD is not a short cut to publication.

180 I am only familiar with the concept and the fact that students will be required to submit electronically. The students I have chaired so far (4) have done it the "old way" – submit paper copies. I will need to learn about the new system as my current student will have to use it.

225 Your survey make(s) me think (that) ETDs will be a real pain (note. Not me). This is the first that I have heard of them. What's been your contact with grad faculty?

297 I am not computer literate but plan to change that. A combination of being "afraid" of computers and lacking time are my excuses.

Normally I have up to 12 students per year I supervise. My plan is to retire in a year and therefore I am not accepting students anymore.

In my day lab I have a good computer with many of the software types mentioned. I stimulate and support my students to become familiar with it and use it. I have a computer in my office which is only used for mail and e-mail.

208 I think the question concerning "innovation" teaching are not properly asked – I have mixed feelings about innovation. Many of our best teachers simply use chalk, but are the most innovative by teaching the most relevant basic principles, while achieving both participation and genuine interest in the subject matter. They teach the fundamentals and do not "fluff" the material. Students are already well exposed to computer technology or the internet.

Also with ETDs – we must be aware that electronic copies, are easily lost. Hand copies are better protected. Also how many people go home to read a book at night on a computer screen. We actually end up using more paper from electronic formats, by printing in many cases.

434 I am completely uninformed about ETDs and have no notion of the additional work load they will generate for faculty. It is my assumption that students will be the ones to carry the burden of the new policy. They need to be train in items mentioned in question 34, not faculty. I am 16 minutes into answering your survey and do not have time to dig out a response for question 14. Thanks

217 I really have no strong feelings about ETDs.

219 I generally favor the idea so long as it does not entirely replace the paper dissertation. In my discipline the production of a book, a readable object, in a primary goal and a visible sign of accomplishment. To eliminate this book for reasons of efficiency or economy is a short-sighted result. It fails to recognize the value of knowledge in a unmonitored aware environment, which is of course the historical essence of a university. I would be technologically and economically more efficient to eliminate grass and trees and anything other than stone physical environments but people would lose far more, and much that is not visibly measurable. Books embody that valuable essence, even in the diverse and least interesting form. Consequently, I favor making ETDs not a required process but an option, even an option with build in incentives if necessary. Unless there is some such flexibility, I will oppose ETDs altogether. And I'll add, the current state of computer support is so unpredictable and inconsistent, even unavailable at times, that to implement any widespread change in such a delicate area seems to be an invitation to chaos which the student will suffer (with).

534 I am glad (that) I am on the downward slope of the mountain

ETDs will enable many of our students to publish more creative kinds of documents. But I am FAR FROM CONVINCED LSU has the infrastructure to support it.

My current office computer, for example – is an antique. I do most of my computer time at home, at my expense.

JUST NEGATIVE

504 Make them go away instead of making them mandatory. I quelche away such foolishness from being implemented in the journal I edit.

276 I believe this will lead to copyright violations and plagarism which will be harmful to LSU PhD.

316 I do not think your survey questions will provide you with much that is helpful.

113 You provided us with a lot of good ideas. (Statement) I did not!

APPENDIX H

FACULTY COLLEGE, DEPARTMENT, AND DISCIPLINE

Table 1 - College of Primary Academic Appointment as Reported by Active Graduate Faculty in a Research Extensive University

College, school, or unit	Frequency	%
Academic Affairs	1	.35
Ag Center	3	1.03
Agriculture	55	19.03
Agriculture Experiment Station	1	.35
Art	2	.69
Arts and Design	8	2 .76
Arts and Humanities	1	.35
Arts and Sciences	59	20.42
Basic Sciences	49	16.95
Biological Sciences	6	2.08
Business Administration	8	2.76
CA&S	1	.35
Chemical Engineering	8	2.76
Civil Engineering	1	.35
COE	2	.69
Coast & Environment	13	4.49
Education	10	3.46

Engineering	26	8.99
Geology	1	.35
Industrial Engineering	2	.69
Library and Information Science	1	.35
Louisiana Universities Marine Consortium (LUMCON)	2	.69
Mass Communications	4	1.4
Mechanical Engineering	2	.69
Museum of Natural History	1	.35
Music and Dramatic Arts	8	2.77
SCE	1	.35
Veterinary Medicine	12	4.15
Unknown	1	.35
Total	288	100.0

Note. One respondent was unknown as to college.

Table 2 - Departments of Respondents as Reported by Active Graduate Faculty in a Research Extensive University

Department	Frequency	%
Accounting	2	

Agricultural Economics	4	
Agriculture Exp Station	1	
Agronomy	3	
Animal Science	4	
Archaeology	1	
Art	2	
Basic Sciences	1	
Biological Engineering	1	
BA Engineering	1	
Biological Sciences	28	9.68
Biological Engineer	1	
CEE	1	
Chemical	8	
Chemistry	6	
Civil and Environmental Engineering	4	
Civil Engineering	4	
Coast and Environment	1	
COMD	3	
Computer Science	3	
Curriculum & Instruction	4	
Dairy Science	2	
DOCS	1	

Economics	3	
Education Leadership Research Counseling	1	
ECE	4	
Electrical and Computer	1	
Electrical and Computer Engineering	3	
Electrical Engineering	1	
English	12	4.15
Creative Writing	1	
English & The Southern Review	1	
Entomology	5	
Environmental Studies	2	
Finance	1	
Living Natural Resources	1	
Fisheries	2	
Foreign Lang	1	
Forestry, Wildlife and Fisheries	14	4.84
Renewable Natural	2	
Food Science	3	
French/Comp Lit	1	
French Studies	1	
French Studies and Women's and Gender	1	
Geography and Anthropology	8	

Geology & Geophysics	4	
Geology	2	
History	7	
Horticulture	3	
HREWD	4	
Human Ecology	7	
Kinesiology	4	
Landscape Architecture	8	
Industrial Engineering	2	
Management and Cataloging	1	
Marine Science	1	
Marketing	1	
Mass Communications	4	
Math	3	
Mathematics	2	
Mechanical Engineering	13	4.49
Museum of Natural Science	1	
Music	5	
Oceanography	6	
Earth Scan	1	
Petroleum Engineering	1	
Philosophy	1	

Physics	3	
Physics and Astronomy	5	
Plant Pathology	3	
Political Science	2	
Psychology	9	
Social Work	1	
Sociology	6	
Speech Communication	1	
Communication	2	
Theater	3	
Veterinary Medicine	1	
Veterinary Clinical Sciences	2	
Clinical Sciences	1	
OBS	1	
Pathobiological Science	1	
PBS	5	
Toxicology	1	
Total	283	100.

Note. Six respondents came from unknown departments.

Table 3 - Discipline of Respondents as Reported by Active Graduate Faculty in a Research Extensive University

Discipline	Frequency	%
Cost and Governmental Accounting and PhD Research Methods	1	
Production and Policy Economics	1	
Marketing	1	
International Trade	1	
Production Economics	1	
Art	2	
Architecture	1	
Soils	1	
Plant Breeding	2	
Animal Science	3	
Genetics	3	
Anthropology	3	
Archeology	1	
Aquaculture Engineering	1	
Neurobiology	4	
Biochemistry and Molecular Biology	3	

Ecology	2
Cell Biology	3
Microbiology	2
Ecology/Evolution	3
Biochemistry	4
Evolutionary Biology	2
SEE	2
Herpetology	1
Biochemistry and Molecular Biology	1
Systematics, Ecology, and Evolution	1
Molecular Biology	1
Reaction	1
Environmental	1
Transport	1
Physical Chemistry	1
Macromolecular	1
Inorganic	1
Inorganic Chemistry	1
Analytical	1
Structural Engineering	1
Environmental and Water Resources	1
Transportation	2

Environmental Engineering	1
Water Resources Engineering	1
Coastal Engineering	1
Geotechnical	1
Linguistics – Phonetics	1
Audiology	1
Information Retrieval	1
Reading Education	1
Mathematics Education	1
Civic Theory	1
Nutrition	2
Econometrics	3
Research	1
Computer Engineering	1
Electronics	3
Computer Engineering	3
Information Technology	1
Computer Engineering	1
Control	1
Processing	1
Creative Writing	1
American Literature	4

Drama and 20th Century Literature	1	
Composition	1	
Entomology	1	
Conservation Biology	1	
Integrated Pest Management	1	
Toxicology	2	
Forestry, Wildlife, and Fisheries	1	
Aquaculture	1	
Fisheries	4	
Food Protein	1	
Forestry	2	
Forest Products	1	
17th – 18th century French Literature	1	
Geography	5	1.73
Contemporary Theory and Interdisciplinary Studies	1	
Sedimentary Geology	1	
Petrology	2	
Paleontology	1	
Clay Mineralogy/geochemistry	1	
Geology	1	
Vertebrate Paleontology	1	
British History	1	

Recent US; Mass media	1
Early Modern (1500 – 1800)	1
Russian and European History	1
Research	1
Genetics	1
Apparel Design	1
Nutrition	1
FCCS	1
Textile Science	1
Textiles, Apparel, and Merchandizing	1
Motor Behavior	1
Physiology	1
Pedagogy	1
Design	1
Information Technology	1
Cataloging	1
Linguistics	1
Television	1
Public Relations	1
Advertising	1
Analysis	1
Number Theory	1

Thermal/ Fluids	2
Control Systems	1
Systems and Design	2
Thermo-Fluids	2
Mechanical Systems	1
Music Education	1
Musicology	1
Music Composition	1
Music Theory	1
Biology	1
Geological Oceanography	1
Coral Reef Ecology	1
Fish Ecology	1
Laws and Regulations	1
Geochemistry/Hydrology	1
Marine Meteorology	1
Riwole Sensing	1
Computer Modeling	1
Coastal Sciences	1
Fisheries	1
Physical Oceanography	1
Enhanced Oil Recovery	1

Philosophy of Science	1
Physics – Theory	1
Astronomy	2
Elementary Particles	1
Astrophysics	1
Physics	1
Astronomy	1
COMD	1
Plant Pathology	2
Forest Pathology/ Mycology	1
Clinical Psychology	3
Political Theory	1
IO	1
Developmental	1
Research and Teaching	1
Sociology	3
Spanish and Italian	1
Performance Studies	1
Rhetoric	1
Theory and Criticism	1
Theater History	1
Landscape Design	1

Immunology	3	
Reproduction	1	
Pharmacology	1	
Microbiology	2	
Surgery	1	
Epidormology	1	
Agricultural/Extension Education	1	
Adult Education	1	
Vocational Education	1	
Adult, Agricultural, Extension and International Leadership	1	
Wildlife	7	2.42
Unknown	67	23.18
Total	222	100.00

Note. 67 respondents chose not to answer this question.

APPENDIX I

ADMINISTRATIVE APPOINTMENT CONCURENT WITH FACULTY APPOINTMENT

1. Lab director
2. Associate chair, undergrad studies
3. Director of research
4. Director of research center
5. Director of an institute
6. Director of a research unit
7. Editor of "Southern Review"
8. Leader – research unit
9. Division head
10. Area head
11. Chair, thermo fluids group
12. Coordinator of theory
13. Academic advisor
14. Director earth scan labs
15. Director
16. Graduate student advisor
17. Center director
18. Resource director
19. Chair of IRB
20. Chief of Health Psy
21. Service chief
22. Associate executive director
23. Assistant tech
24. Program leader

APPENDIX J

"OTHER AS SPECIFIED" FOR ACTUAL TIME AND OFFICIAL TIME

"Other As Specified" for Actual Time

1. Filling out forms like this and all things that force their way onto my desk
2. Editing
3. Editing magazine
4. Board of regents grant
5. e-mail
6. Service to the profession: committees, editing
7. Combination and outreach
8. Class preparation
9. Review NSF proposal and journal articles

"Other As Specified" for Official Time

1. Curator
2. Editing

APPENDIX K

NEEDS ASSESSMENT MODEL FOR THE STUDY

Model for Needs Assessment

(copyright Dalton Cote 1996).

The following model was developed to conduct needs assessments in many different situations. It is based on a synthesis of the literature and practical experience from conducting a number of needs assessments.

Main Activity	Enabling Activities	Remarks
Determine Purpose	Determine the reason for the analysis	• identified performance deficiency • new innovation or re-structuring • routine systematic analysis
	Collect background information	-existing studies, reports, concerns
	Determine scope of the analysis	-consider importance, time and resources (including costs)
Develop Plan	Identify aim	-consult with stakeholders and initiator of the analysis -educate and explain process (if required)
	Identify sources of information	
	Develop time-line	
Plan Data Collection	Select data collection methods	- literature review, questionnaires, interviews, focus groups, observation
	Determine data collection procedures	- how and when is the data to be collected (time, cost, where are the sources of info located?)
	Determine how to analyze the data	• quantitative measures • qualitative measures

	Develop data collection instruments	• develop questions • trial instruments • amend instruments
Collect and Analyze Data	Collect data	
	Compile data	
	Analyze results	
Identify required levels of current and future performance	Organizational vision, missions and goals	
	Subject Matter Experts	- seeking of opinions
	Job Analysis and Task Analysis	• job descriptions • performance outcomes and measurement criteria

Identify current level of performance	Extant data analysis	- existing output data (productivity reports, safety reports, etc ...)
	Opinion Analysis	- seeking opinions of supervisors, managers, SMEs, and workers
	Observation	
Identify problem areas	Determine the performance deficiency or "gap"	
Identify cause(s) of problem	Generate possible causes	• lack of skill/knowledge • lack of motivation • lack of or inadequate incentives • poor work environment (tools, equipment, assistance, job aids, organization, etc ...)
	Identify probable causes	
Identify solutions	Identify possible	• revision of policies and procedures

	solutions	• job re-design • new equipment or technology • improved tools/job aids • improved working conditions • recruiting/selection • job re-assignment • performance appraisal and counseling • revised organizational structures • training
	Evaluate solutions	- assess feasibility, costs and risks of both implementing or not implementing solutions
	Select best solution	- determine appropriate OPI to implement solution
Communicate results and recommendations of study	Develop report to be presented to stakeholders	- background - aim • methodology • findings • conclusions/recommendations • proposed implementation plan

A Model for Needs Assessment (copyright Dalton Cote 1996).

VITA

Ursula Irene Anna Goldsmith was born in Manchester, New Hampshire, of parents who were doctors. She was raised in Western New York State near a Seneca Indian Reservation and on the grounds of a hospital there she belonged to the Grange, Girl Scouts, 4-H, and learned alternative medicine. The hospital was a total self-sufficient unit with farms, furniture building areas, bakery, and victory gardens. In 1957, Ursula graduated in the top of her class from Boardman High School in Youngstown, Ohio. She entered the United States Army from 1958 to 1961 and holds the Good Conduct Medal, Service Ribbon, and received three Citations. She then attended Pasadena City College (associate of arts degree, 1962) where she was elected to Alpha Gamma Sigma honor society at the University of California at Los Angeles (bachelor of arts in intellectual history, 1965). She completed a certified masters in business administration (accounting) and certificate in human resource counseling.

She worked in private industry as a systems analyst and controller (medicine, astronautics – MOL/APOLLO, SKYLAB, and the present SHUTTLE, and also in entertainment). She has worked as a librarian and volunteer. In 1997 she earned a masters degree in library and information science from Louisiana State University and a certificate in advanced studies in library and information science in 2001. She was invited to join Beta Phi Mu honor society. Ursula furthered her doctoral studies in vocational education (higher education/adult education) in 1997 at LSU with emphasis in electronic media. In 2000 and 2002 she presented papers on mentoring graduate

students and new faculty and ETDs (Electronic Theses and Dissertations). She is a Master Gardener. Her other hobbies include stained glass and ballroom dancing. Ursula plans to continue her career as an administrator and teacher.