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A comparison of administrator and faculty self-report and knowledge of distance education, related intellectual property laws and policy, and tenets of academic freedom

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A COMPARISON OF ADMINISTRATOR AND FACULTY SELF-REPORT
AND KNOWLEDGE OF DISTANCE EDUCATION,
RELATED INTELLECTUAL PROPERTY LAWS AND POLICY,
AND TENETS OF ACADEMIC FREEDOM

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

Department of Educational Leadership, Research, and Counseling

by

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ABSTRACT

Distance education is an emerging force in higher education that is creating new opportunities and added challenges. The purpose of this study was to identify and compare what university administrators and faculty know about issues that surround a debate about ownership of intellectual products created for distance education including technologies used in distance education and the law, university policies, and tenets of academic freedom that are supposed to stimulate intellectual creativity. An Internet-based survey was used to gather data from university faculty and administrators at four southeastern research universities in the United States. Results indicated that respondents were almost universally familiar with distance education, and that more than one-third create teaching materials expressly for use in distance education. Further, results indicated that more than two-thirds of participants were aware of university intellectual property ownership policies, but less than one-quarter reported knowing details of those policies. Although participants agreed that protections provided by U. S. Copyright Law are important, more than one-third of faculty and one-quarter of administrators admitted that their knowledge of the law was, at best, vague. Although a wide majority of respondents reported familiarity with academic freedom, when the accuracy and depth of their knowledge was examined, it seems their understanding was largely impressionistic. Although few unexpected differences were identified, administrators were shown to rely more heavily than faculty counterparts on universities to stay informed about the issues of interest in this study. Results from the study suggest that if leaders are needed to help realize the opportunities and meet the challenges created by emerging technologies and distance education, universities will need to take initiative to develop expertise among faculty and administrators.

CHAPTER I

INTRODUCTION

During the last decade, American higher education has become heavily invested in distance education. Contemporary, technology-driven distance education has been embraced as a potentially cost effective means of overcoming time and location barriers to make higher education more attractive and accessible to today's students (Gorman, 1998) who are older, and are more often working and managing families (National Center for Education Statistics, 2002). Additionally, distance education provides residents in rural communities access to the same educational opportunities as their counterparts in large cities (Major, 1995). In these respects, distance education promises to help public universities better satisfy their traditional outreach missions.

Information technology is an increasingly integral element in higher education, and it has transformed distance education. Personal computers, the Internet, computer software programs, and satellite television are making a noticeable impact on teaching and learning. Together, these information technologies have transformed the traditional concept of distance education from pen and paper, mailbox-dependent correspondence courses to an interactive process that is facilitated by electronically distributed instruction. Today, commonly accepted definitions of distance education contain three essential elements. First, distance education is a formal educational process. Second, the students and instructor who engage in distance education are in separate geographical locations during at least a majority of the instructional process. Finally, participants in distance education are connected and course content is conveyed through a range of educational media. Technology options include satellite, video, audio graphic, computer, and

multimedia technologies. Instruction may be conveyed synchronously (in real time) or asynchronously.

Distance education requires that instructional materials once prepared for the classroom must be transferred and fixed in a variety of electronic media. The World Wide Web, launched in the 1990s, has become one of the fastest growing media distribution systems in history and has quickly emerged as a popular publishing medium--a place to share and store text and images (Frauenfelder, 2001). This unexpected communications phenomena is challenging social and legal constructs of publishing and is causing governments, courts, and campuses to re-examine legal and ideological frameworks which have organized publishing practices. While copyright laws are under governmental and judicial review, universities are trying to sort legal issues against academic practices and traditions that further complicate emerging publication issues.

The guiding traditions of academic freedom in America originated from ideology born in German universities during the mid-1800s. The German philosophy embraced the notion that universities should be places of unfettered pursuit of knowledge through research and study (Lucas, 1996). The German ideology is translated and expressed in documents and policies, crafted by the American Association of University Professors (AAUP), which define the privileges and responsibilities of faculty and suggest means by which a context that honors and supports scholarship is best achieved (2001). AAUP doctrine holds universities and faculty members accountable for tailoring relationships that promote discovery, growth, and dissemination of knowledge.

The social benefits of scholarly environments have been recognized and supported by the courts. Some prescriptions for achieving an open community of scholars are found in remedies

the courts have applied when academic freedom has been challenged by special interests. The sum of the courts' united disposition is that neither universities nor government authorities should take actions that limit faculty members' freedom to reason, create artistic works, or engage in scientific inquiry.

The legal framework that has customarily helped to organize publishing practices in academe flows from the United States Constitution which mandates ownership protections for authors' and inventors' intellectual property. Constitutional protections of intellectual property ownership are intended to stimulate inquiry, creativity, and invention and to encourage authors and creators to submit their work to the public domain, thereby guaranteeing public access to all human knowledge (Hawke, 2001). U. S. Copyright laws are the promulgation of the mandate expressed in the U. S. Constitution and specify a bundle of rights belonging to authors. These rights are the legal framework of protections extended to academics who create intellectual properties in the course of their teaching and scholarship activities. Provisions of the Act allow that some or all of authors' rights may be assigned to other parties when special conditions are satisfied (U. S. Copyright Act, 1790). Though the special conditions permit universities to claim ownership of certain intellectual property created by faculty, universities have been reluctant to make ownership claims because such claims threaten long standing traditions in the academy.

The advent of electronic technologies and publishing media have caused lawmakers to examine the applicability of existing legal protections to new forms of intellectual property. The Digital Millennium Copyright Act (DMCA) was enacted, as a revision of existing copyright law, to extend ownership protections to authors who create and distribute works through electronic publishing media. Though the DMCA squarely places printed materials transferred to electronic

media within U. S. Copyright protections, the Act does not tease apart and clarify the interests that reside in complex university-faculty partnerships.

The challenge to universities and faculty is how to maintain the traditions that organize academic life and sustain an open community of scholarship that benefits the community at large in the face of evolving technology which challenges existing laws and academic customs. New creative frontiers are emerging against a backdrop of shrinking budgets, and universities and their faculty are struggling to fit together new opportunities, existing customs, and limited resources. This challenge has ignited a debate, surrounded by legal and ideological issues, over who owns intellectual property transferred to information technologies.

Purpose of the Study

The purpose of this study is to identify what university administrators and faculty know about electronic forms of distance education, intellectual property law, university policies governing ownership of intellectual property products prepared for electronic distribution, and the tenets of academic freedom that have helped to promote creative thought and innovation of ideas and products.

Background and Need for the Study

Over decades, academic traditions and practices have been harmonized with public law to create an environment that encourages creativity, and the advancement and understanding of human knowledge. The harmony achieved serves to delicately balance the competing interests of creators of ideas and knowledge, institutions who employ them, and the public's right of access to created knowledge and products. Intellectual property is the legal concept that allows ownership of creativity and innovations in the same way other types of property may be owned.

In the legal realm, intellectual property is composed of four distinct categories: inventions, brand identity, product appearance, and literary, art, and musical material. The corresponding legal protections are patents, trademarks, designs, and copyright (The U.K. Patent Office, 2000).

Within the academy, certain practices and traditions have been established to encourage development of the products of intellectual property. Academic freedom is an ideology that is translated into practices for the exact purpose of fostering creativity, and the development and advancement of knowledge. Universities institute policies for the specific purpose of fostering development and free-flow of knowledge and thereby ensure a fair balance of competing interests. Since universities are in the business of advancing and distributing knowledge and virtually all academics create some kind of intellectual property in their teaching or research, principles of academic freedom and the laws that foster creativity and encourage advancement of knowledge are of great importance to all who work in the academy (Scott, 1998; Rhoades, 2001).

New information technology products used in contemporary distance education are not easily fit into existing intellectual property paradigms. Consequently, as universities and faculty have become more heavily invested in technology-driven distance education, a debate has developed over who owns the intellectual products created for electronic distribution in universities' distance education programs. The debate is rancorous and appears to be fueled by expectations of profits, possible misconceptions about intellectual property ownership, and likely misinterpretations of the rights and traditions associated with academic freedom (Scott, 1998). How these issues are understood should have an effect on resolutions reached to settle current ownership conflicts. And, the resolutions agreed upon will have certain implications for the traditions, practices, and culture of American higher education. Further, the decided resolutions

will impact a legally protected party that is not actively represented in the current campus debate--the public who has rights to access to knowledge. Identifying university administrators' and faculty knowledge of these issues should shed light on their preparedness to wisely resolve current ownership dilemmas.

Research Questions

1. What do university faculty and administrators know about university policies and laws regarding ownership of intellectual property products prepared for electronic distribution?
2. What do university faculty and administrators know about electronic forms of distance education?
3. What do university faculty and administrators know about the ideological tenets and legal definitions of academic freedom?
4. What are the similarities and differences in knowledge between university faculty and administrators?

Definitions of Terms

Asynchronous Distance Education: A type of two-way communication that occurs with a time delay which allows participants to respond at their own convenience. The interactions are literally not synchronous--not at the same time.

Broadcast/Cable Television: Television broadcast that is delivered and received through a community access antenna (cable) or personal antenna.

Chat: Two or more individuals connected to the Internet have real-time text-based conversations by typing messages into their computer.

Compressed Video: A digital transmission process used to transmit a video signal. When the vast amount of information in a video transmission is compressed into a fraction of its former bandwidth, the resulting “compressed” video can be transmitted more economically and through existing phone lines.

Computer Conferencing: A form of group discussion that uses text messages that are grouped into topics and conversations. A conference is a place on the World Wide Web (WWW) where people come together to discuss a topic and follow the flow of information.

Copyright Act: Legislation that is intended to balance the interests of copyright owners with the interests of the public. It provides incentives for authors to create; but allows for the public to benefit from access to copyrighted works.

Distance Education: A formal education process that occurs when students and instructors are in different geographical locations but are connected, and the majority of instruction is delivered, through one or more electronic technologies.

Electronic Mail (E-mail): A computer-based exchange of communications, data files, and other information between users connected to computer dial-up facilities dedicated networks and/or information service providers (ISP).

Electronic Teaching Products: Instructional materials and methods that are developed for delivery through a range of electronic mediums.

Groupware: Computer software and hardware that is used for shared interactive computer environments.

Instructional Television Fixed Services (ITFS). A band of low-power microwave frequencies set aside by the Federal Communications Commission (FCC) exclusively for the transmission of

educational programming, and licensed to public institutions. ITFS is typically used in urban areas and requires a specialized antenna. Receiving sites require a converter capable of changing signals to those used by a standard television set.

Integrated Course Delivery Packages: Course management systems that allow for creation of course material, and also manipulation, modification, control, backup, support of data, and student records. The tools are accessible over the Web using standard Web browsers. Examples include Blackboard, LearningSpace, and World Wide Web Course Tools (WebCT).

Intellectual Property: The legal concept that allows ownership of creativity and innovations in the same way property may be owned. In the legal realm, intellectual property is composed of four distinct categories: inventions, brand identity, product appearance, and literary, art, and musical material. The corresponding legal protections are patents, trademarks, designs, and copyright (The U.K. Patent Office, 2000).

Internet: A worldwide network of computer networks which was begun in 1962 as a resilient computer network for the U. S. military. Over time, the Internet has grown into a global communication tool of computer networks that share a common addressing scheme.

Internet Service Provider: A company or organization that provides a link between individuals and organizations to the World Wide Web.

Intranet: A computer network that is designed for the internal communications needs of an enterprise.

ListProc/ListServ: A program that maintains a mailing list and forwards messages to e-mail subscribers.

Multimedia: Systems that support the interactive use of text, audio, still images, video, and graphics. Each of these elements must be converted in some way from analog form to digital form before they can be used in a computer application. Thus, the distinction of multimedia is convergency of previously diverse systems.

Netnews. The individual content of a newsgroup posting.

Newsgroup: A public place on the Internet where messages are posted for public consumption and response.

Telecommunication: The process of transmitting or receiving information over a distance by any electrical or electromagnetic medium. Information may take the form of voice, video, or data.

Streaming: Digital technology that makes it possible to watch or hear large media files while they are being electronically delivered and without having to save files to a computer hard drive.

Synchronous Distance Education: Instruction that is delivered in real-time, by an instructor who is geographically separate from students.

World Wide Web (WWW): Interconnected by the Internet, the WWW is hypertext-based, distributed information system originally created to facilitate information sharing. WWW consists of text, pictures, audio and visual files from millions of computers around the world. The WWW is often used as the delivery mechanism for online courseware.

Significance of the Study

The significance of the study is threefold. First, it is expected to advance knowledge about what administrators and faculty members know about the issues involved in the current intellectual property ownership debate. This information is expected to be useful for making decisions about who may be best prepared to provide campus leadership in policy-making for

distance education initiatives. Second, the proposed study has potential for influencing the development of universities' administrator and faculty training and development programs. Finally, it has possibilities for influencing the curriculum by suggesting content that may be added to higher education leadership programs.

Overview of the Study

Chapter One is an introduction which includes the purpose, research questions, limitations, and significance of the study. Chapter Two offers a review of the related literature concerning intellectual property law, the increasing role of and challenges posed by distance education in higher education, and traditions and law that define academic freedom. Chapter Three presents the research methodology used in the study, with descriptions of the population and sample, instrumentation, data collection, and data analysis. Chapter Four describes the study findings, including a descriptive respondent profile, and both major and ancillary findings. Chapter Five includes a discussion of the findings in the study and, presents conclusions and recommendations that are based on the findings.

CHAPTER II

A REVIEW OF RELATED LITERATURE

Growth and Impact of Distance Education

A Brief History of Distance Education

The 1862 Morrill Act (a.k.a. Land-Grant Act) is identified as the federal legislation that paved the way for contemporary distance education. Following this legislation, agricultural agents traveled to rural areas to offer “classes” for farmers (Green, 2001). By the 1890s correspondence courses were instituted to help rural farmers improve their businesses. Coursework involved free postal distribution of print materials to participants who engaged primarily in essay writing (Rossman & Rossman, 1995).

In the 1960s and 1970s, non-interactive television courses became a popular solution to meeting the growing demand for access to education that was created by college-aged, degree-seeking, baby-boomers and open enrollment policies that were designed to ensure equal access by attracting the poor and minorities (Reasons, 1999). At the same time, there was enormous growth in educational broadcasting on public television. This combination resulted in a boom in asynchronous telecourses to meet increased demand and reduce the problem of limited space at two- and four-year campuses (Rossman & Rossman, 1995).

During the 1960s and 1970s, closed circuit technologies that emerged in the 1950s were used to transform the asynchronous telecourse into a variety of synchronous videoconferencing options. Now, microwave and satellite technologies produce two-way audio/one-way video and two-way audio/two-way video communication options that are used to link together, in real-time, students who are geographically apart from one another and their instructors (Reasons, 1999).

Computer-assisted learning, designed to complement printed course materials, emerged during the 1970s. Early renditions of computer-based instruction required students to use local terminals to access university mainframes. By the mid-eighties university networks were strained and the personal computer provided an alternative that made learning “at a distance” even more accessible and convenient (Jones, et. al, 1996). By 1987, 10 states were heavily promoting distance education; a year later that number had grown to nearly two-thirds of states; and, by 1989 virtually every state had made commitments to distance education programs (McIsaac & Gunawardena, 1996). Launching the Internet in the early 1990s marked another milestone for computer-based learning. By 1998, more than 800 institutions were offering computer-based distance education courses and degree programs (Reasons, 1999).

Recent studies indicate that distance education has become an increasingly important element in higher education. A 1998 U.S. Department of Education study found that 80 percent of all four-year institutions offered some type of distance education and more than 1.66 million students were enrolled in some form of distance education (National Center for Educational Statistics, 1998). When all types of public and private institutions were considered, 74% of all institutions made course offerings available via video transmission and 58% offered courses through asynchronous medias such as Web-based instructional platforms (Blackboard, customized instructional Web-sites, etc.), CD-ROM, and multimode packages, (Baldi 2000; U.S. Department of Education, 1998). By 2001, 89% of public four-year institutions were offering distance education, 28% of those institutions were offering undergraduate degree programs, 45% were offering graduate or professional-degree programs, and the aim of 72% of those institutions

was to expand the number of delivery sites to increase student access (Chronicle of Higher Education, 2003, p.14).

Publication Outlets and Research Centers

Another indicator that electronically conveyed distance education has taken root in higher education is the emergence of university-based research centers and publication outlets developed to further the study and advancement of distance education. In 1986, The American Center for the Study of Distance Education (ACSDE), a University of Pennsylvania College of Education research unit, emerged as the first unit of its kind in the country. Initially, the ACSDE served as a hub to establish and grow a national network of academics interested in distance education. Over time, ACSDE has become a clearinghouse of research and information about distance education (Penn State College of Education, 2002). The Graphics Visualization Usability Research Center (GVU) at Georgia Tech has accumulated a wealth of information on the growth and trends of Internet usage through its GVW WWW Survey. The Survey annually collects data about Web demographics, user attitudes, and usage patterns (GVU, n.d.).

The increase of relevant publication outlets has complemented the growth in use of instructional technology. Though these outlets are a mix of national and international journals, and not-for-profit and proprietary enterprises, U. S. universities are encouraging scholarly research and dialogue through publication outlets of their own. In 1987, the University of Pennsylvania launched *The American Journal of Distance Education* (AJDE) which is dedicated to advancing knowledge about the interface between technology and higher education. Studies published in the AJDE trace the development of distance education and its impact on instruction, university structures, faculty, and students (Koble & Bunker, 1997). *The Journal of Computer-*

Mediated Education (JCMC) was begun in 1995 by the University of Southern California Annenberg School of Communication and focuses on integration of theoretical analysis and empirical investigation on a range of issues related to distance education. *The Journal of Electronic Publishing* is a University of Michigan Press publication that is concerned with “theory, policy, and practice of writing in an electronic medium” (Ryder, 2002). In spring 1998, State University of West Georgia published the first volume of the *On-Line Journal of Distance Education Administration* (OJDEA) which focuses on empirical and critical analysis of distance education management issues. These journals contain a representative sample of the issues related to distance education that are currently being investigated, discussed, and debated and their existence implies that distance education is ever more entrenched in American higher education.

Costs and Benefits of Distance Education

Costs

An early expectation for distance education was anticipated cost savings corresponding to increased access and enrollment in higher education. Though cost savings are theoretically possible in the long-term, short- and mid-term savings currently seem unlikely. True costs can be up to ten times higher than the purchase price of technology once all expenditures are added including establishing technology infrastructures and hiring technology experts. Further, there are hidden costs associated with time required for faculty and additional support staff to transfer course content and instruction to a new medium (van Dusen, 2000; Carr, 2001). For instance, it takes from two to 10 hours to prepare one hour of classroom lecture. To transfer one hour of instruction from primary classroom media (face-to-face lecture and interactions, as well as books

and other print materials) to Web-based instruction is, on average, 18 hours; and, nearly 100 hours is required to make transfer to broadcast television when support and technical staff time is added (Boettcher, 1999).

However, actual cost comparisons are very difficult to make because distance education has a different cost structure than classroom instruction, one that involves higher fixed costs (start-up costs) but lower incremental costs for adding more students. Additionally, accurate cost comparisons of the physical infrastructures required for distance education and traditional classrooms are difficult to make. Jewitt (1999) developed a specialized comparative framework that produced an analysis which indicated that after initial outlays for infrastructure, costs for distance education and classroom instruction become equal when class enrollment levels were high. Furthermore, time and labor-saving innovations are developed and refined each year to help reduce transfer time and production costs. Some of these innovations include standardized Web-based platforms such as Blackboard and WebCT and adoption of commercial publishers' software packages. Institutional innovations including interstate compacts and consortia create cost and instruction-sharing partnerships which further help to offset or minimize start-up costs. In turn, these innovations help partners more quickly reach break-even points, if not profitability (Boettcher, 1999). Though cost analysis that considers time and labor-saving innovations do provide a more accurate appraisal of expenditures, they fail to consider the potential benefits of distance education as a relevant factor. Though not commonly conducted, a cost-benefit analysis is a recommended strategy for determining the viability of distance education programs and serves as a basis for institutions to determine the return on investment (Lee & Owens, 2000).

Though including benefits in costs analysis should provide a better fiscal assessment of distance education, the benefits that are currently realized are hard to quantify.

Benefits

Some experts suggest that distance education is helping to achieve a range of desirable objectives and benefits. Studies show that faculty agree with the many experts who assert that reaching new populations of learners is a primary benefit of distance education (Dillon, 1992; Carr, 2001; Garrison & Anderson, 1999; Grenzky & Maitland, 2001; Morrison, 1999). Because distance education allows flexible learning that is not constrained by time or place, students are more able to determine when and where they conduct their studies (Garrison & Anderson, 1999; Havice, Watson, Cawthon, & Underwood, 2000). The added convenience of distance education options is attractive to non-traditional students whose life-circumstances may otherwise prevent pursuit of higher education. Though new populations of learners may be attracted by distance education, many students enrolled in on-campus programs prefer distance education options because the additional flexibility permits them to work or more easily schedule their studies (Morrison, 1999).

In addition to increasing access to higher education and creating flexible learning opportunities, teaching strategies used in distance education are believed to have some advantages over traditional classroom instruction. Contemporary learning theories suggest that students learn better when they are involved and engaged in activities, and when procedures are used that help students make decisions and solve problems (Fuhrmann & Grasha, 1998). Students' critical thinking skills are found to be significantly enhanced by peer-to-peer interaction and participation in interactive learning opportunities (Smith, 1998). In spite of these

findings, in face-to-face classrooms 80% of instruction is in the form of lecture, and questions and interactions comprise only five minutes of a fifty-minute lecture period (McFadden, Marsh, & Price, 1999). While faculty speak about 5,000 words in an average lecture, students record an average of only 500 words (Johnstone & Su, 1994). The lecture method has been criticized for producing poor learning outcomes in long-term retention, transfer and application of knowledge, and student motivation (McKeachie, Pintrich, Y-Guang, & Smith, 1986).

When technology is carefully selected, teaching and learning at a distance may be more highly interactive than the traditional classroom lecture. Interactive technologies such as e-mail, file-sharing, on-line discussion groups, and chat require more student-to-student and student-to-instructor interactions than generally occurs in a face-to-face classroom. These options also make it possible to tailor lesson planning to suit a broader range of individual learning styles.

Additionally, digital venues give students who may feel reluctant to contribute in face-to-face classrooms different options for interactive participation. When media are carefully selected and instruction thoughtfully designed, distance education is highly learner-centered; the focus becomes learning rather than teaching (Beaudoin, 1990).

Another important benefit of electronic learning is the additional content that technology brings to the learning experience. The World Wide Web provides a link to supplemental content which enriches the learning environment and may act as a catalyst for discovery and engagement (Morrison, 1999).

Though it is possible to make an argument that these benefits are worthwhile and justify the added costs, strained budgets have prompted university administrations to consider ways of recovering some costs. Development and commercialization of distance education courses is one

idea that universities have entertained to reconcile the growing financial costs of higher education. This idea has given rise to a debate over who has ownership of the information technology products that are developed for instruction for delivery through electronic media.

The Debate Over Intellectual Property Ownership of Information Technology Products

Part of the argument used to support universities' claims of ownership to faculty created copyrighted materials stems from the practices established for ownership of, and profits derived from, patents. In 1980 the partnership between the federal government and American research universities was strengthened when the U.S. Congress enacted legislation granting universities "the right to seek patents for scientific discoveries made by their faculty and staff with support from federal funds" (Liebeskind, 2001, p 49). Since that time, universities have given increasing attention to the potential economic benefits associated with patents. Universities have intensified efforts and have shown aptitude for exploiting the economic potential associated with federal patents through royalties and licensing arrangements made with industry (National Science Foundation, 2002). To move discovery rapidly forward, policies, procedures, and contractual agreements have been implemented to routinize the processes by which responsibilities of the parties involved are delineated (university, faculty, and business) and the ways that profits from "big ticket" inventions are divided (Rhoades & Slaughter, 1991). The evidence that these operationalizing mechanisms have been implemented with success is in the steady growth in numbers of patents awarded to universities since 1980. Sharper increases correspond to increased willingness on the part of U.S. Patent Office to grant "upstream" patents (patents for pre-development or building-block works). Between 1996 and 1998 the number of patents awarded to universities jumped from 47,000 to 108,000, promising greater profits to universities

(National Science Foundation, 2002). Universities' appetite for reputational benefits and potential financial profits which may flow from faculty creations has stirred interest in the reward potential of other intellectual property products, particularly those information technology products prepared for online publication and distribution.

Although many universities have long-standing policies declaring that the university owns all products prepared with substantial use of university resources, they have been reluctant to press an ownership claim of copyrighted works created for teaching (Gorman, 1998). Despite the fact that faculty conduct intellectual work on university property, and use university libraries and equipment when creating syllabi, lecture notes, tests, articles, and other teaching materials, universities have been reluctant to challenge the tenets of academic freedom and independent thought by pressing a copyright ownership claim on these work products (Simpson & Turner, 2001). Because creation of copyrighted works is generally assumed to draw less significantly on institutional resources than development of patentable inventions, the academic *modus vivendi* allows faculty ownership of copyrighted products they independently create for academic purposes, but permits universities to claim patents on inventions and share profits with faculty creators (Gorman, 1998; Smith, 2002; Thompson, 1999). Consequently, the prevailing practice has been to treat faculty members as the copyright owners of the teaching materials they create (Gorman, 1998; Simpson & Turner, 2001; Smith, 2002; Thompson, 1999). This long-standing practice has survived, largely unchallenged, until digital technology prompted growth in distance education.

Development and commercialization of distance education has ignited a contentious debate over ownership of intellectual products created for and conveyed through information

technologies. What fuels this debate is the high development costs and potential commercial profitability of products that heretofore have been fixed in print, audio, and visual media (Gorman, 1998; Rhoades, 2001; Sanoff, 2000; Scott, 1998; Simpson & Turner, 2001; Smith, 2002; Thompson, 1999; Welsh, 2000). In these traditional media, property ownership is clarified in copyright law. Once transferred into an electronic medium, however, intellectual property does not easily fit into existing paradigms of copyright or patents. The distinctive features of these products have tempted university administrations to create a new category that favors university ownership (Thompson, 1999). The central issue in this debate is which “community” model should be applied to the academy; “that of the corporate community, in which ownership is a function of controlling the means of production, or that of the professional community, in which ownership is a function of creative input” (Rhoades, 2001, p. 41). University administrations argue that creating intellectual products for information technologies requires substantial use of costly university resources. This argument is used to justify institutional claims of ownership (Gorman, 1998; Simpson & Turner, 2001; Smith, 2002). Further, university administrations argue that a fixed feature of electronic dissemination of instruction is the implied “market brand” that is attached to the university’s name. University administrations argue that market brand attaches value to the products created by faculty and, consequently, profits should accrue to the university.

The opposing argument is that universities’ claim to ownership of faculty-generated works profoundly contradicts the assumptions and practices of the academic community. This argument is bolstered by claims that the fundamental tenets of academic freedom assume that ideas are the stock and trade of faculty; to encourage creativity and production of ideas, faculty

must be assured ownership of the products of their own intellectual processes (Smith, 2002). The American Association of University Professors (AAUP) embraced this position in its first ever *Statement on Copyright* in 1999, when it asserted that because faculty-creators must determine what and how to teach and what work to pursue toward those ends, institutional ownership is “totally inconsistent with the principles of academic freedom” (AAUP, 1999, p. 183). This view assumes that the work of the professoriate must be to promote the public interest in advancement and understanding of knowledge, not the interests of their universities (Gorman, 1998, p. 16).

Despite the fact that this debate was ignited by intellectual products created for distance education, ownership conflicts could be much farther reaching. Before digital technologies, the profitability of intellectual products seemed restricted to patentable products. Since the expansion of distance education, “university administrators and trustees have begun examining the humanities and arts for ideas and products they can sell” (Scott, 1998, p. 22). How the conflict between intellectual property ownership and academic freedom is reconciled with respect to distance education products has ownership implications for all faculty-created intellectual property. Though higher education could be transformed by how this conflict is resolved, faculty are assumed to be largely unaware of the issues involved in questions of intellectual property (Scott, 1998). The issues in conflict appear to arise from tension between the copyright law, traditions of academic freedom, and institutional policies regarding ownership of intellectual property. The professional literature, and relevant laws and court decisions related to academic freedom and U. S. Copyright law enrich the framework and context for this investigation.

Defining Academic Freedom

History and Tradition

Contemporary traditions of academic freedom in the United States are built on ideology that was revealed to American scholars while visiting German universities during the mid-1800s. During that time, Americans discovered that the German view of higher education differed from the dominating populist view in the U.S that university education should be dedicated to satisfying the professional needs and serving the practical interests of the country. American scholars were fascinated by the German notion of “university” as a center of learning where professors and students were encouraged to pursue knowledge through study and research without interference. As increasing numbers of American scholars traveled to Germany to advance their educations, greater numbers became socialized to German traditions and dedicated to the ideal of free scholarly inquiry (Barzun, 1993; Lucas, 1996). By the 1940s, principles of academic freedom had helped to define both the modern function of U. S. universities, and the nature and character of the work of the professoriate (Lucas, 1996). These definitions were formalized when the practice of academic tenure was instituted as a measure to protect and preserve academic freedom (AAUP, 2001, Lucas, 1996; Rosovsky, 1990).

Academic Tenure. In 1940 the American Association of University Professors (AAUP) put forth the first clear definition of academic tenure within the academy and declared its purpose to serve as the first line of defense to ensure academic freedom and protect the professoriate from capricious actions of administrators and trustees (Lucas, 1995; Rosovsky, 1990). In essence, AAUP academic policy guidelines recommended protection of academic freedoms for probationary and tenured professors. In addition to protection of academic freedom, academic

tenure is a practice that provides job security for faculty whose efforts are determined to make significant contributions to the profession and to the institution. Essentially, academic freedom is supposed to accomplish two aims: a) to foster an atmosphere conducive to open inquiry and scholarship and b) “to ensure a sufficient degree of economic security to make the profession attractive to men and women of ability” (AAUP, 2001, p. 3).

Ideological traditions and institutional policies regarding academic freedom have helped to define the work, roles, privileges, responsibilities, and obligations of the professoriate. In this respect, academic freedom is a set of principles that helps to organize the structures and relationships within academe and to define its function within the larger society. Fundamentally, the university is obliged to create a context which honors and supports unfettered scholarly inquiry and the professoriate is obliged to contribute to discovery, growth, and dissemination of knowledge.

Legal Definitions and Protections

Although ideology, tradition, and institutional policies and procedures regarding academic freedom help to organize the complex interpersonal relationships and hierarchies within academe, the courts have been called upon to clarify ideological constructs. Though openly reluctant to intervene in the life of the American university, when the court has acted it has acknowledged the unique attributes of the academy while trying to resolve conflicts within legal prescriptions that organize social relationships in a larger, national context. The few, but pivotal, court cases that define the legal contours of academic freedom fall within Constitutional and statutory zones. Constitutional issues refer to First and Fourteenth Amendment rights. Patent and copyright laws form the borders of statutory zones.

Constitutional Principles and Academic Freedom

During the middle of the McCarthy era , the U. S Supreme Court opened the door for legal foundations of academic freedom in *Adler v. Board of Education of City of New York* (1952). Forty teachers originally filed a suit that was finally heard on behalf of eight plaintiffs who claimed forced signing of loyalty oaths was unconstitutional. The pleadings challenged the loyalty oath, rather than the law; the historical context was such that the majority disposition of the court favored state over individual interests. In the end, the Court found for the state, based solely on the narrow pleading of the plaintiff. Though the Court held for the state, Justice Douglas laid legal groundwork for protection of academic freedom in his dissenting opinion when he wrote:

“What happens under this law is typical of what happens in a police state....A pall is cast over the classrooms. There can be no real academic freedom in that environment...stupidness and dogmatism take the place of inquiry...A problem can no longer be pursued with impunity to its edges. Fear stalks the classroom.” [Electronic version, p. 15]

In his opinion, Justice Douglas’ decision became the lynchpin that linked together academic freedom and the First Amendment.

The bedrock of the legal foundations of academic freedom were firmly established by the 1957 U. S. Supreme Court in *Sweezy v. New Hampshire*. The Sweezy case arose from a state statute prohibiting “subversive persons” from state employment including in public educational institutions. Paul M. Sweezy, a university guest lecturer, was held in contempt and jailed for refusing to answer questions in a state investigation that alleged his membership in the

Communist Party. The focus of the investigation was Sweezy's remarks about government to a class of University of New Hampshire students. Sweezy petitioned The U. S. Supreme Court claiming his First Amendment (free speech) and Fourteenth Amendment (due process) rights were violated by the inquiry (Olivas, 1997; Maricopa County Community College District, 1998). The Court invalidated the contempt ruling and, in their findings, Justices Warren and Frankfurter set forth the legal foundation for academic freedom. In his opinion, Chief Justice Warren wrote: "[t]he essentiality of freedom in the community of American universities is almost self-evident....To impose any strait jacket upon the intellectual leaders in our colleges and universities would imperil the future of our nation."(Electronic version, p. 7)

In his concurring opinion, Justice Frankfurter further strengthened the majority decision and explicated the contemporary legal standard and test for academic freedom:

“In a university knowledge is its own end, not merely a means to an end. A university ceases to be true to its own nature if it becomes the tool of Church or State or any sectional interest. A university is characterized by the spirit of free inquiry, its ideal being the ideal of Socrates - ‘to follow the argument where it leads.’”

.....

“Freedom to reason and freedom for disputation on the basis of observation and experiment are the necessary conditions for the advancement of scientific knowledge. A sense of freedom is also necessary for creative work in the arts which, equally with scientific research, is the concern of the university.

.....

“....It is the business of a university to provide that atmosphere which is most

conducive to speculation, experiment and creation. It is an atmosphere in which there prevail ‘the four essential freedoms of a university - to determine for itself on academic grounds who may teach, what may be taught, how it shall be taught, and who may be admitted to study.’ (Law Find, Electronic version, p. 16)

In 1967, the Court re-visited New York City teacher loyalty laws in *Keyishian v. Board of Regents*. In *Keyishian*, the Court expressly linked academic freedom to the First Amendment. *Sweezy’s* influence is on the face of the *Keyishian* majority opinion written by Justice Brennan:

“Our nation is deeply committed to safeguarding academic freedom, which is of transcendent value to all of us and not merely to the teachers concerned. That freedom is a special concern of the First Amendment, which does not tolerate laws that cast a pall of orthodoxy over the classroom.” (Electronic version, p. 7; Rabban, 2001).

In *Dow Chemical v. Allen* (1982), the court determined that academic freedom “extends as readily to the scholar in the laboratory as to the teacher in the classroom.” (Olivas, 1997, p. 221). The issue in *Dow* was whether University of Wisconsin researchers could be compelled to turn over research work-products (notes, raw data, working papers, etc.) that might help save the chemical company from government cancellation of a contract. The Court held that enforcing subpoenas that required full, and on-going, disclosure of research work products would have a chilling effect on First Amendment rights and academic freedom that would “inevitably tend to check the ardor and fearlessness of scholars, qualities at once so fragile and so indispensable for fruitful academic labor.” (Olivas, 1997, p. 222)

In a 1978 civil rights case, *Regents of the University of California v Bakke*, the Court empowered universities to institute affirmative action practices by specifically extending the

principles of academic freedom to university administrations. In *Bakke*, the Court held that there is a countervailing First Amendment interest in universities' right to select students who will best contribute to the "robust exchange of ideas" (Olivas, 1997, p. 286). The Court acknowledged that selection of students is one of four essential academic freedoms that form the legal test set forth in *Sweezy*. By empowering the university to enact affirmative action policies and practices to correct effects of the history of racial discrimination in college admission, the *Bakke* court raised the issue of whether or not academic freedom within the professoriate flows from the institution (Rabban, 2001). For 25 years, the *Bakke* court's findings stood largely unchallenged and ensuring academic freedom with respect to selection of the student body.

In 1996, an appellate court decision in *Hopwood V. State of Texas* threatened the long-standing assumptions of faculty freedom with respect to college admissions when the court overturned a previous ruling and held that any consideration of race in college admission is unconstitutional. Although the defense appeal to the U. S. Supreme Court in the *Hopwood* case were declined, the Court accepted on appeal two University of Michigan cases in which the legal issues originally raised in *Bakke* appeared to stand in bolder relief.

The complaint in *Grutter v. Bollinger* challenged an admission process that considered multiple indicators of undergraduate achievement and applicants' "under-represented minority" status with an aim toward achieving "diversity" among the law school student body. The complaint in the comparison case, *Gratz v. Bollinger*, revolved around a point-system in undergraduate admissions that favored minority applicants by an additional 20 points. Together the cases formed a legal test of whether universities should be allowed to discriminate in admissions solely on the grounds that it values diversity (a purely academic aim), or whether

discrimination is only justifiable as a means of reversing past racial injustice, as suggested in *Bakke*. In *Gratz*, the Court found that use of a “quota” system for the expressed purpose of achieving racial parity did not meet the test of a “compelling state interest.” However, in *Grutter* the Court upheld the university’s right to consider race as a factor in admissions because of the educational benefits that flow from a diverse student body. The Court’s decisions appear to clarify the role of universities. The rulings suggested that while the Court does not regard the university as a mechanism for correcting social ills, it did see fit to guarantee it the freedom to choose “who will be taught” in a process that will best satisfy scholarly aims. In the end, the Court’s decision appears to confer the freedom upon the university at large, rather than the faculty specifically, to choose who will be taught.

Copyright

The basis of American copyright law is found in Article I, Section 8, Clause 8, of the U. S. Constitution which empowers Congress “. . . to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.” The First Congress passed the Copyright Act of 1790: An Act for the Encouragement of Learning, by Securing the Copies of Maps, Charts, and Books to the Authors and Proprietors of Such Copies. The 1790 Act granted authors the right to print, re-print, or publish their work as an incentive to authors, artists, and scientists to create original works by providing creators with a time-limited monopoly. Time limitations were imposed to stimulate creativity and the advancement of “science and the useful arts” through wide public access to works in the “public domain” (U.S. Copyright Act, 1790).

The U. S. Copyright Law

The U.S. Copyright Act was first revised in 1831 to extend the ownership protection to authors from 14 years (renewable for a second 14 years), to 28 years with a possible 14-year extension. The 1879 revision in the Act moved copyright registrations from district courts to the Library of Congress Copyright Office. In 1909 the Act was revised to again extend the term of protection to 28 with a possible 28-year renewal, and to broaden the scope of categories protected to include all works of authorship. Major revisions to the Act in 1976 accomplished three objectives. First, because technology developments made distribution of copyrighted materials more widely available than ever before, “fair use” provisions were crafted to ensure more liberal access to copyrighted materials through information technology delivery systems. Second, the Act was tailored to better harmonize with international copyright law, practices, and policies. Third, terms of protection were extended to the length of the life of the author, plus 50 years; and, in the case of “works for hire” ownership rights were protected for 75 years (Masciola, 2002).

Though the intent of the 1976 revisions in the Copyright Law was to implement forward thinking legislation that would ensure protections in a developing technology environment, within 20 years technological advancements had out paced the U. S. law. In 1996 the World Intellectual Property Organization (WIPO) convened a conference to negotiate international treaties to protect copyrighted materials in a digital environment. The Digital Millennium Copyright Act of 1998 (DMCA) was enacted to harmonize with the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty that were adopted following the 1996 conference, and to keep pace with digital publishing trends in the U. S. Title IV of the DMCA

contains provisions related to distance education that protect copyright owners of distance education materials (Quinn, n.d.). Although Title IV of the DMCA clarifies fair use statutes that are designed to limit unpaid distribution of copyrighted materials via digital technology, the DMCA does not settle the intellectual property ownership dispute that surrounds faculty-created educational materials that are distributed digitally. Consequently, legislative statutes have left open the question of who owns copyrighted instructional materials prepared for distribution through electronic media.

While campuses have more easily resolved ownership issues surrounding patented products, settling ownership of copyrighted materials has proved more difficult. One reason for the difficulty is that copyright law is considerably more complex than patent law. Copyright law encompasses a bundle of rights that includes “the rights of reproduction; of translation, abridgement, and revision (the right to prepare so-called derivative works); the right of public distribution; and the right of public performance and display” (Gorman, 1998). Though copyright protection is extended to literary, musical, dramatic, and choreographic works, pantomimes, motion pictures, and other audio-visual works (U.S. Copyright Act, 1787; Hawke, 2001), most copyrighted works within the academy take form as written publications which belong neither to the faculty or the university. These works belong to publishing houses. Though faculty may receive cash advances or royalties from written works, they most often sign away copyright ownership in trade for having works published and thereby satisfying institutional expectations and requirements for tenure and promotion within the university (Rhoades, 2001). There are other incentives for signing copyright ownership over to publishers that are more scholastically motivated. Publication of faculty works contributes to scholarly discourse, fuels new ideas, and

promotes the advancement of knowledge. In signing away copyright to publishers, scholars retain rights to revise, translate, and abridge their work. In practice, signing away copyright ownership to publishers does not result in total relinquishment of faculty members' intellectual property. Through established publication practices, authors retain rights to revise, translate, and build upon their works in further publication; but published works allow scholars access to colleagues' works, thereby forming a "community of scholars" who are free to dispute, confirm, affirm, expand, or challenge one another as a process by which knowledge is generated. These established practices imply that original authors are likely to retain a sense of ownership of intellectual property.

Copyright, the Courts, and the Academy

The ownership and publishing customs of the academy encourage a scholarly community and provide effective mechanisms for growth and distribution of knowledge. These customs have been traditionally honored by universities and affirmed by the courts. These traditions and the courts' position is explicated in the facts and judicial decisions of the appellate court in *Weinstein v. University of Illinois (1987)*. In *Weinstein*, a University of Illinois faculty member filed complaint against the University in an attribution issue. The plaintiff claimed damages resulting from a colleague's significant revision of his original work, and from his colleague having submitted the paper for publication as the first author. The plaintiff argued on the theory that employment and promotion opportunities are tied to the number of attributions of primary authorship a faculty member achieves, and that the plaintiff was damaged by revision of his work and re-attribution of primary authorship to his colleague. Based on the conditions specified in the university's standard contractual agreement with faculty and an interpretation of the

“exceptions provisions” in copyright law, the circuit court held that because the article in question constituted a “work-for-hire,” the plaintiff had no claim. The circuit court’s decision was overturned by the district appellate court in a finding which stated that requiring faculty to write may motivate scholarly activity, but that a simultaneous property claim is not made with that “requirement or duty.” The *Weinstein* appellate court held that in making a “publish or perish” demand, the University does not simultaneously make a copyright claim based on publishing being an employment requirement or duty within the meaning of copyright law, and the lower court’s interpretation of the “exception provisions” was misguided. The court held that the dispute rested between the author-owners of the property and found that, as a co-owner of the property, Weinstein’s colleague was within his legal rights to make changes to the manuscript and to reattribute to himself primary authorship. The fact that the court saw Weinstein’s suit as a retaliatory action for being fired because he had failed to satisfy the productivity standards of the university does not weaken the court’s position that faculty who produce scholarly works own them. In fact, the court’s position that the issue was between co-author-owners, and did not involve the university, seems to add weight to faculty claims of ownership of intellectual products. Since *Weinstein*, in the few other cases on this matter, the courts have almost always held that universities’ claims of ownership on faculty-generated works contradict the assumptions and practices of the academic community and violate the principles of academic freedom (Gorman, 1998). In spite of the fact that there is no statutory works-for-hire exception for faculty works, many universities have policies stating that faculty own the copyright for certain of their works which contribute to a scholarly climate and culture (Hawke, 2001, p. 33).

Works-for-Hire Exceptions

The copyright claims that universities sometimes make on faculty-generated works are most always made under the “works-for-hire” doctrine in the copyright law (Gorman, 1998), and it is this doctrine that is the basis for contemporary claims to works that are produced for publication in electronic media used in technologically-assisted instruction and distributed education. The works-for-hire doctrine is contained in The Copyright Act of 1976, which contains the basic framework for current copyright law. U. S. copyright law (1976) assigns ownership of works fixed in tangible media to the original author, except in situations where a “works-for-hire” exception is made. A “work made for hire” is:

- a) a work that is prepared by an employee within the scope of her or his employment; or
- b) a work that was specifically commissioned or ordered by the publisher. The work must fit into one of the following distinct categories i) a contribution to a collective work, ii) part of a motion picture or other audiovisual work, iii) a translation, iv) a supplementary work (prepared as an adjunct to another author’s work) v) a compilation, vi) an instructional text, vii) a test, viii) answer material for a test, or ix) an atlas
- c) If the above conditions are satisfied, the parties must enter into a written agreement that specifies the commissioned work is a “work made for hire” (The Copyright Act, 1976; Rich, 1995).

Product Models Influencing Institutional Policies

Advances in teaching technologies have challenged universities and faculty to fit emerging opportunities into existing ideological and legal paradigms. To move distance education forward, many universities have developed policies that are supposed to encourage the

further development of distance education technologies, motivate faculty to create teaching materials for e-learning, and increase access to education via electronically conveyed education. The considerable variation among these policies expresses a range of views that are difficult to reconcile. Two models seem to be driving policy decisions: the textbook model of intellectual property ownership and the patent model of intellectual property ownership.

The Textbook Model

Advocates for traditional practices generally agree that there is no functional difference between the instructional materials which faculty prepare to enhance classroom instruction (textbooks, handout materials, lecture notes) and instructional materials transferred to electronic media for distance or distributed education. A common view is that the right to decide what will be taught, and how, is conferred to faculty through constructs of academic freedom. There is a shared notion that relinquishing ownership of new types of instructional materials would pose threats to the integrity of individual faculty members' intellectual work. Many faculty are concerned that if universities take ownership of the copyrighted products of faculty intellectual work, the institutions may revise and standardize the curriculum, thereby subverting faculty rights to decide what is taught and how. Further concerns arise that standardizing the curriculum could open doors to replacing teacher-scholars with less qualified teaching assistants, and relegate faculty to positions as institutional course designers (Garrison & Anderson, 1999). Some faculty are also concerned about whether they will have portability rights to take course materials with them if they leave one university for employment in another. Still other concerns have arisen about whether faculty will have rights to royalties and other forms of profit derived from faculty work products (Rhoades, 1998; Slaughter & Rhoades, 1990; Welsh, 2000). When these

concerns are reviewed in sum, two primary considerations seem to drive faculty arguments against universities' claiming ownership of faculty intellectual property. The first of these considerations appears to be suspicion that university claims might radically effect the relationship between faculty and university. The second consideration is concern that the policies and practices instituted to resolve conflicts over intellectual property will dramatically alter the community culture of the university (Agre, 2000-2001).

The Patent Model

From the university's point of view, the patent model is much less complex. Relationships between the institution and faculty involved in patent research are generally contractual in nature. Universities purchase and own the buildings, labs, and equipment necessary to conduct patent research; faculty members carry out research objectives. Universities accrue profits and recover the significant costs associated with creating research infrastructures that are necessary to produce patentable products. Faculty rewards most often come in the form of significant extrinsic rewards (increases in base salary, travel money, and other benefits) and intrinsic rewards that are associated with professional accomplishment (Welsh, 2000). There are fewer grounds for dispute over patents. Patent research often requires universities to make enormous outlays of expenditures that justify cost recovery. Patent research certainly may inform teaching activities, but is not an activity that is necessary for effective teaching. The financial incentives can be sufficient to satisfy the university and the faculty.

A strict interpretation of copyright law may support universities' ownership claims on faculty works created for delivery of instruction via distance education technologies. Some institutions hope that a case for ownership is strengthened by the assertion that the university

provides exceptional resources that are necessary for creation of distance education instructional materials. Within the frame of academic freedom and scholarship, however, there is a clear presumption of faculty ownership of these intellectual property products (Gorman, 1998).

Summary of Related Research

Because distance education is anticipated to have clear effects on higher education policies, procedures, and practices, it has become a focus of scholarly inquiry. The body of distance education research is summarized and evaluated in several notable meta-analyses. Calvert (1995) surveyed 33 abstracts submitted to the Canadian journal, *Journal of Distance Education*. Abstracts were selected from submissions made during a 12-month period during the journal's infancy in the late 1980s. Almost half of the articles fell into two categories: 1) evaluation of distance education programs and materials, and 2) definitions of distance education. Calvert concluded that the nature and content of the articles were consistent with what is expected in development of a new field of study.

In 1991, Scriven examined articles from the first 10 years of *Distance Education*, an Australian journal. Ten distinct categories of articles were identified from the 109 articles that were examined. Over half of the articles (56) were classified under three headings: "Students and their characteristics," "Telecommunications and media," and "Specific programs and courses." Scriven reported the data revealed a faint suggestion of trends in the research, specifically in the areas of distance education theory development, investigation of dropout rates, and investigation of quality in course design and teaching materials.

In 2002, Rouke and Szabo reported findings from a content analysis of articles published between 1986-2001 in the *Journal of Distance Education*, a Canadian Association of Distance

Education (CADE) publication. Evaluation of the topics included in the analysis revealed two categories of topics that occurred more frequently than all others. Specifically 13.6% of the articles referred to foundations of distance education and 13.2% referred to technology and media. The authors concluded that articles in these categories occurred more frequently during this period because of a preoccupation in the 1980s with issues related to the status of distance education as a “discipline” and whether graduate programs were merited. When data was compared with previous meta-analyses in the literature--Kolbe and Bunker (1997), Scriven (1991), and Sturrock and Howard (1989)--findings indicated that ‘foundations of distance education’ and ‘technology/media’ were the most frequent item categories across journals (the *Journal of Distance Education* and the *American Journal of Distance Education*). The analysis revealed that four types of articles accounted for approximately 70% of the items reviewed. The primary categories were “Empirical,” “Description,” “Publication Review,” and “Viewpoint.” Articles in the “Empirical” category composed nearly 30% of articles in the sample. When empirical process was evaluated, a trend emerged indicating that qualitative methods have been increasingly applied during the past 20 years.

The only meta-analysis of an American publication was reported in 1997 by Koble and Bunker. The study involved a content analysis of *The American Journal of Distance Education* between 1987 and 1995. Researchers applied the following topic categories devised by the International Center for Distance Learning (ICDL):

1. Theory, Research, and Policy;
2. Types and Levels of Providers;
3. Subjects and Fields;

4. Psychology of Distance Learning;
5. Student Administration and Support;
6. Instructional Design and Management;
7. Methods, Technology, and Facilities; and
8. Administration and Staffing

Data analysis revealed that the ICDL categories did not accommodate all of the articles in the journal. Rather, seven broad categories emerged, six of which corresponded to the ICDL classification; “Subjects and Fields” was deleted. Using a modified version of the ICDL, analysis revealed that 25.6% of articles fell into the Theory, Policy and Development category, 20.9% of the items related to effectiveness, evaluation, and methods of Media and Delivery Systems; 15.5% referred to Institution, Staff, and Management; items focusing on Student Psychology, Motivation, and Characteristics accounted for 14.7%; and 23.3% of items fell into remaining categories. Further analysis revealed that during early years of research scholars focused on establishing “conventions, standards, and appropriate discourse for the journal.” The large percentage of articles in the Theory, Policy, and Development category appeared during the early years of publication while articles in Media and Delivery Systems increased in later years of publication. (Rouke & Szabo, 2002, p. 31).

Dillon and Walsh (1992) conducted an analysis of articles published in five major journals: *Distance Education*; *Journal of Distance Education*; *Research in Distance Education*, *The American Journal of Distance Education*, and *Open Learning*. Twenty-four of 225 research studies were identified as having a focus on faculty issues. Sixteen studies focused exclusively on faculty, while other articles examined faculty in relation to administrators (four studies), students

(three studies), and policy makers (one study). Thirteen studies examined faculty attitudes toward distance education and four studies examined administrator attitudes. The meta-analysis revealed that only one study examined issues of ownership. That study, indicated that the level of instructor control over the teaching/learning process was the greatest predictor of faculty willingness to teach at a distance.

Building on the work of Dillon and Walsh (1992), Havice, Watson, and Cawthon (2000) examined administrator perceptions and attitudes toward distance education. Administrators' exposure to and knowledge of distance education was the strongest predictor of positive attitudes. Upper and mid-level administrators held significantly more positive attitudes toward distance education than low-management counterparts. Stienhart's (1998) and Havice's (2000) studies indicate an increasing interest in faculty and administrators' interest and investment in distance education.

Research related to issues that surround the current intellectual property ownership debate did not emerge in the literature until very recently. A case study of how the Kansas Board of Regents and its six public universities "developed intellectual property policies for ownership of mediated course materials" indicated that "[t]he most contentious issues that emerged...were differences between faculty and academic administrators pertaining to the ownership and control of the various forms of copyrightable materials created by faculty as well as the distribution of royalties or other compensations resulting from the commercialization of technology-based course material" (Welsh, 2000). The case analysis indicated that university administrators believed that the property ownership dispute was a major barrier to advancing distance education initiatives needed to maintain the University's market share of students. Administrators appeared

to agree that developing and implementing an institutional policy that favored University ownership of intellectual property would sufficiently offset program costs and resolve the ownership dispute, thereby clearing the path for expansion of distance education. The faculty rejected administrators' assumptions and argued that the traditional values of the academy, such as autonomy, academic freedom, and quality should not take preference over ephemeral goals of the institution. The author concluded that faculty must become activists to successfully preserve and develop the purpose and value of higher education in the United States.

The degree to which faculty may be aware of some of the issues that surround the current intellectual property ownership debate was examined in a 1997 study of Monash University (Australia) faculty (Monotti, 2000). The study was conducted three years after the University instituted formal intellectual property ownership policies. At that time, 95.4% of faculty produced print materials for teaching; 46.4% used computer presentations; 10.5% produced multimedia works for teaching; 31.6% used films or videos; 15.8% used computer programs; and 22% used other works in digital form as teaching materials. These statistics indicate that an overwhelming number of faculty use copyrightable materials in their teaching and a sizeable number have incorporated teaching technologies in instruction of students.

Analysis of participants' awareness of copyright issues and University intellectual property policies revealed widespread familiarity with more commonly occurring types of patentable products (inventions, 93.8%) and copyrightable products (copyright, 92.3%; designs, 78%; and trademarks, 74.5%), but less familiarity with obscure products such as confidential information (53.4%), breeders rights (38.9%), and circuit layout (42.6%). Seventy-six percent of faculty who taught in sciences were aware of the University's intellectual property policy,

compared with 60% of their counterparts teaching in the humanities. The University was identified as the source of information and knowledge about intellectual property by 71.8% of respondents, but only 67.5% knew about the University's intellectual property policy. Only 37% of the science faculty and 32% of humanities faculty acknowledged familiarity with the way ownership rights are distributed in the policy between the University and individual faculty members. The author concluded that faculty had only moderate awareness of intellectual property laws and related University policies.

Monotti's study substantiates claims that faculty have little knowledge of some important issues that surround the intellectual property ownership debate that has arisen out of the development of distance education. Though the findings from the study provide useful information, the scope does not consider a full range of issues that drive the contemporary dispute over ownership of intellectual property, and it is difficult to determine the degree to which the findings are generalizable to faculty in the United States who are invested in teaching and research. This study builds upon Monotti's previous investigation to determine what United States faculty, in major research universities, know about a broader range of issues related to intellectual property ownership.

CHAPTER III

METHOD

Restatement of the Purpose

The purpose of this study was to identify what university administrators and faculty know about electronic forms of distance education; law and university policies that govern ownership of intellectual property prepared for electronic distribution; the tenets of academic freedom that are intended to promote creative thought and innovation of ideas and products; and the differences and similarities between the two groups' knowledge in each of these areas. Approval for the study was granted by the Louisiana State University Institutional Review Board on April 30, 2003 (Appendix A).

Research Design

The survey method of research was used to conduct a descriptive study of four Land-Grant universities in states that hold membership in the Southern Regional Education Board. The instrument used for this study, "*Survey of Administrator and Faculty Knowledge of Distance Education and Related Intellectual Property Issues*," is described in detail on pages 49 -52 and is included as Appendix B. It was adapted from two survey instruments used in previous studies. The first of these instruments was *Ownership and Exploitation of Intellectual Property in Universities: A National Comparative and Theoretical Study Survey* (Monotti, 1997). Ann Monotti developed this instrument to measure faculty members' knowledge of intellectual property policies and issues at Monash University in Clayton, Australia. Monotti, Senior Lecturer at Monash Law School, granted permission for use of the survey in this study (personal communication). The survey was modified to include a section designed to measure

respondents' familiarity with the legal and ideological constructs of academic freedom, and to collect a wider range of demographic data for participants. The added portions followed the form and format of survey items in the original survey from which it was adapted. Although no reliability tests were reported for Monotti's (1997) original instrument, tests for internal reliability were conducted on sections used from the original instrument and for new sections added in the revised version used in the study. Results from reliability analyses are provided on pages 54 -55 of this report.

The second survey instrument, *Survey of Higher Education Administrator Perceptions and Attitudes Towards Technology Based Distance Education*, was developed by Havice (2000). Permission was granted for use of the survey by Pamela Havice, Assistant Professor at Clemson University (personal communication). Items adapted from Havice's survey provide a broad framework of demographic data and are not used to measure conceptual constructs investigated in this study. Consequently, no reliability measures were performed for items that produced data of a demographic nature such as faculty rank, race, gender, age, and so on.

Pilot Study

A pilot study was conducted to test the ease of use of the electronic survey, to detect technical problems before the planned study, and to determine a likely response rate. The University of Texas at Austin (UT) was selected as the university for the pilot study because it is commonly considered to be a forerunner and model for distance education. Consequently, it was expected that participants would have some interest in the study; a fair response rate was likely; and the feedback solicited by the pilot would be most useful since UT faculty were likely to be familiar with distance education technology and surrounding issues of interest in this study.

The sample for the pilot study was drawn from electronic mail directories on public Websites operated by the University. All of the University's administrators who could be identified through these public domains were selected for participation including presidents/chancellors, vice-presidents/chancellors, deans and directors of academic units, and so forth. Similarly, a systematic one-in-four sample of faculty was selected from the College of Arts and Sciences (one of the largest academic units on the main campus). The survey was mailed electronically to 233 participants (147 faculty and 86 administrators). Eighteen faculty and 11 administrators responded during a two-week period allocated for the pilot, which was a 12.4% response. The response rate was evaluated against sampling principles that suggest that "the smaller the population, the bigger the sampling ratio has to be for an accurate sample." According to this principle, when sample size is under 1,000, for example, a sampling ratio of about 30 percent is needed for an accurate sample. "For large populations (over 150,000), smaller sampling ratios (1 percent) are possible, and samples of about 1,500 can be very accurate ((Neuman, 1997, p. 222)."

To increase prospects for obtaining a representative sample when the full study was conducted, plans were made to extend the period of time during which the study was conducted, to send a second request to increase responses among those who did not respond to the first request, and to highlight an incentive to provide results from the study to anyone requesting them. In addition to these measures, a plan was made to sizably increase the sample population with the expectation that an accurate sample may be achieved from a significantly larger population, even if the response rate remained stable.

During the course of the pilot study some minor technical difficulties were detected and corrected. Nine respondents reported difficulties with formatting of the survey and adjustments were made to ensure that all survey and response items could be easily viewed from a variety of

sizes of computer screens. Respondents' feedback and results from the study indicated a need for some minor refinements in wording of some of the items, and the necessary and recommended corrections were made. The final survey is included as Appendix B in this report.

Population and Sample

The population for the study was faculty members and administrators from four southern Land-Grant universities. Because Land-Grant universities are historically charged with implementing distance learning in the nation, and outreach remains a central element of their mission today, these institutions were of particular interest to this study. A national survey of 67 Land-Grant institutions found that distance education has become an important element in the missions of these institutions (Kambutu, 2000).

To ensure some level of homogeneity in the population, selected universities were chosen from member institutions in the Southern Region Education Board. The selected universities include the University of Florida, Louisiana State University, the University of Georgia, and the University of Tennessee, Knoxville. Though the region within which these universities reside is geographically, economically, and socially diverse, the states within which they reside share historical and political similarities compared with other regions of the country. Additionally, the selected universities are often considered "peer institutions" within the region for comparison purposes (Louisiana State University, 2003).

In addition to their shared status as Land-Grant institutions, each of the selected universities holds the same "Research Extensive" ranking assigned by the Carnegie Foundation for the Advancement of Teaching (2000). Consequently, the universities were already stratified through the Carnegie system based upon the programs offered, the number of degrees awarded, and the amount of federal funding each receives.

Each of the selected universities has developed distance education initiatives that are intended to increase access to higher education in their respective states. All of the selected universities have intellectual property policies that include special provisions applying specifically to products of research/scholarship and teaching materials that are prepared as part of university employment and published on university Web-servers.

The sample for the study was faculty members and administrators from each of the four selected schools. Although the full complement of academic programs varies among the selected universities, all campuses share six academic units in common: Agriculture, Arts and Sciences, Business, Education, Mass Communications, and Veterinary Medicine. Each of the academic units in common has a customary and corresponding complement of departments that represents a wide range of academic disciplines from humanities and sciences. To ensure similarity in participants from each campus, faculty were selected from all of the departments in each of the six academic units in common among the four selected universities.

Selected universities differed in student enrollments, per student expenditures in terms of tuition and state appropriations (The Chronicle of Higher Education, 2002), and the number of faculty among the universities; specific differences are reported in Table 1. Additionally, analysis of descriptive data from the study indicated a significant difference ($X^2(398) = 35.652, p = .008$) between universities' faculty composition based on highest degrees earned by faculty. Table 2 shows a crosstabulation of frequency data and expected counts for each category of faculty rank by university. The University of Georgia employs the highest percentage of faculty who hold a Ph.D. (94.3%), followed by the University of Florida (93%), Louisiana State University (86.8%), and the University of Tennessee (84.6%).

Table 1

Student Enrollment and Per Student Expenditures by University

University	Student enrollment	Per student expenditures
University of Florida	43,000	\$10,400
University of Georgia	30,900	\$14,200
Louisiana State University	31,600	\$8,268
University of Tennessee	25,400	\$14,700

Table 2

Crosstabulation of Data for Chi-Square Highest Earned Degree by University

Highest earned academic degree	University of Florida	Louisiana State University	University of Georgia	University of Tennessee	Total
Bachelors					
Count	1	0	0	0	1
Expected	3	.3	.2	.2	1.0
Masters					
Count	1	13	2	5	21
Expected	6.0	6.7	4.2	4.2	21.0
Ph.D.					
Count	94	99	67	55	315
Expected	89.5	99.8	62.8	62.8	315.0
Ed.D.					
Count	3	1	1	1	6
Expected	17	1.9	1.2	1.2	6.0

(table 2 continued)

D.V.M.					
Count	1	1	0	1	3
Expected	.9	1.0	.6	.6	3.0
J.D.					
Count	1	0	1	10	3
Expected	.9	1.0	.6	3.4	3.0
Other					
Count	3	5	2	17	17
Expected	4.8	5.4	3.4	17.0	17.0
Total					
Count	116	104	73	73	336
Expected	116.0	104.0	73.0	73.0	366.0

Sampling Procedures

The sampling frame for this study was all faculty and administrators identified on university operated, public Websites at each of four Research Extensive, Land-Grant universities selected for this study. Because a low response rate was anticipated, specific measures were taken to increase prospects for an accurate sample and valid statistical inference. First, a

systematic random selection procedure was implemented (Schonlau, Fricker, & Elliott, 2001). Second, to improve the accuracy of the sample, all administrators identified on public Websites were included in the study and a one-in-two selection process of from each of the six academic units in common at all four universities was used. These sampling procedures were implemented to ensure the population sample was sufficiently large to suspect an accurate, or representative, pool of respondents (Neuman, 1997). Using these sampling procedure, a sample size of 3375 was achieved which resulted in a sampling ratio that may be thought sufficiently large to expect “representativeness” of the population from which it was drawn (Babbi,1979; Neuman, 1997). Using the Survey System Sample Size Calculator (Creative Research Systems, n.d.) a sample size of 345 was calculated as the minimum required to suggest a representative sample from a population of 3375 with a 95% confidence level.

Surveys were electronically distributed to administrators and faculty who were identified on public Websites operated by each of the selected universities. Electronic mailing addresses were selected from Websites and “cut and pasted” into e-mail address books; one for faculty, another for administrators, which simplified the electronic (e-mail) distribution of the survey. The introductory e-mail provided a link to a Web-based Internet survey. All persons in the sampling were e-mailed surveys twice to ensure receipt and encourage participation. Duplicate surveys were automatically excluded by the Perseus Program used in this survey.

Survey Returns

From two e-mailings of 3375 surveys, 413 were returned for a total response rate of 12.2% which was consistent with the return rate for the pilot study and satisfied the minimum number calculated for an accurate sample at a 95% confidence level. Of those responding, 401

participants reported their primary employment. There were 261 participants who identified themselves as exclusively as teaching or research faculty and 140 participants identified their work as including some level of administrative responsibilities. Since the data were descriptive in nature and the sample size was relatively large, aggregate data for each item were included in the data analyses. None of the surveys was excluded in data analyses.

Instrumentation

The survey, which can be found in Appendix B, contained nine sections. Section A, titled “Research and Teaching” consisted of two items that identify the forms (e.g., literary works, patentable inventions, sound recordings, etc.) in which participants produce scholarly results and teaching materials for the classroom and distance education. Section B is entitled “Awareness of the Concept of Intellectual Property,” and contained three items that require participants to acknowledge awareness, identify the forms of intellectual property with which they are familiar, and identify sources of their knowledge and awareness of the concept of intellectual property.

Section C, “Knowledge of University Policies in Intellectual Property” consisted of two items that required participants to acknowledge whether or not they were aware that their university has an intellectual property ownership policy and the sources of their knowledge about the policy. The third item required participants to identify whether they were aware of obligations to report intellectual property to the university. The fourth item, a six-point structured response scale (on a continuum that ranges from strongly agree to disagree and included “neutral” and “no opinion” response categories) required participants to describe their familiarity with how institutional policy allocates ownership rights, whether or not the policy was perceived as

problematic, and the degree to which policy information was effectively made available.

“Academic Rights in Research & Teaching Materials,” Section D, contained two items. Both items required participants to rank, in order of importance, the rights that are conveyed with copyright ownership. Item one required ranking importance of ownership rights in relation to scholarly works. The second item required ranking importance of ownership rights in relationship to teaching materials.

Section E, “Awareness of United States Copyright Law,” required respondents to indicate their familiarity with the way U.S. copyright law allocates rights to intellectual property. This section contained six Likert-type items with a six-point structured response scale (very familiar, somewhat familiar, not at all familiar, etc.) that corresponded to each of the rights protected under U.S. copyright law (the right to reproduce, make derivative works, distribute copies, etc.). A final item asked respondents to identify all of the sources of information from which knowledge of copyright law was obtained.

Section F is titled “Knowledge of Distance Education Technologies.” Respondents were asked to specify whether they had heard of the term “distance education” and to identify each of ten forms of technology used in distance learning programs (videotape, compressed video, video streaming, etc.) with which they were familiar. Additionally, respondents were asked to report their familiarity with each of 11 forms of supporting technologies and tools used in electronic distance education (electronic mail, newsgroup, chat, Internet, etc.). Finally, the survey asked participants to identify whether they had created teaching materials for use in distance education courses.

Section G, “Awareness of the Concept of Academic Freedom,” required participants to identify whether they were familiar with the term “academic freedom.” Respondents who affirmatively responded to item one were also asked to identify authorities who provide guarantees of academic freedom (university policies, American Association of University Professors, The United States Constitution, and U. S. Courts). A subsection contained four Likert-type items with a six-point structured response scale (Very Familiar, Somewhat Familiar, Not At All Familiar, etc.) that corresponded to principles of academic freedom set forth by the AAUP. A final subset of questions contained six Likert-type items with a six-point structured response scale (Strongly Agree, Neutral, Strongly Disagree, etc.) that asked respondents to identify research and teaching freedoms and practices that are governed by principles of academic freedom.

“Potential Commercial Application of your Research/Scholarship,” was Section H of the instrument. This section contained items that required respondents to identify if their scholarship had potential commercial application; and if so, the form or forms in which their scholarship is likely to materialize (e. g., literary work, artistic work, video or film, computer program). The final item in this section asked respondents to indicate how much of their current, commercially profitable scholarship is subject to some degree of third party control.

The last section of the survey, Section I, was titled “Demographic Information.” Items included information on personal characteristics of respondents (age, gender, etc.), job title/academic rank, length of employment, and so on. Additional survey items were included to determine more about the nature of respondents’ work (full- or part-time employment, etc.). Further, the instrument was designed to categorize respondents in terms of the nature of

employment in one of four categories: Teaching and/or Research Faculty; Teaching and/or Research Faculty with Some Administrative Responsibility; Administration with Some Teaching and/or Research Responsibility; Administration. Participants who indicated having some degree of administrative responsibility were also asked to identify themselves in one of three groups: Group I was composed of chief academic officers, provosts, and associate or assistant provosts; Group II included deans of colleges or divisions, and Group III included associate deans; chairs, directors, or heads of departments or schools; academic program coordinators; and those holding other types of administrative positions customarily assigned to teaching faculty as part of their regular employment responsibilities. Additionally, respondents were asked to identify the academic unit with which they were most closely affiliated, and to identify the “subject” or “discipline” in which most of their teaching assignments occurred. For comparison purposes, participants’ responses to Question 35, which asked participants to “type the name of the unit/division/discipline in which you primarily teach” were re-coded to correspond to an existing taxonomy (Appendix C) adopted by Del Favero (2002) that is an expansion of Biglan’s original conceptualization involving three dimensions that “...appear to characterize the subject matter of academic areas in most institutions. The dimensions are (a) the degree to which a paradigm exists, (b) the degree of concern with application, and c) concern with life systems (1973, p. 202).”

Procedures

Data Collection

The instrument was written to an Internet-ready format using the *Perseus Survey Solutions*© software for the development of Web-based surveys and made available through a

Web-address created for the study. Responses were anonymously sent ly to the investigator's e-mail, where data were coded for use with *SPSS 9.0 for Windows*©. Informed consent (Appendix D) to participate in the study was explained in an introductory Web-page (Appendix E) where participants were required to indicate consent before proceeding electronically to the survey. Consistent with anonymous survey research regarding human subjects, no personal identifying data were solicited or collected through the completion or submission of the survey instrument. All data collected through submission remained in coded electronic format.

Research Questions

The research questions for the study sought to identify what university faculty and administrators know, and to compare their knowledge, about intellectual property law and university policies that govern ownership of intellectual property, electronic forms of distance education, and the tenets of academic freedom that have helped to promote creative thought and innovation of ideas and products.

Data Analysis

Data analysis specific to the purpose of the study fell into three general categories. First, descriptive statistics were used to describe and explain the demographic and professional self-report characteristics of the primary respondents in the sample (i.e. number of usable surveys, age and gender of respondents, reported academic discipline, etc.) and the legally protected forms of intellectual property in which the products of their research/scholarship and teaching are classified by legal statute.

Second, and consistent with generally accepted uses of descriptive analyses (Grimm & Yarnold, 1995), descriptive statistics were used to describe respondents' self-reported knowledge

and familiarity with intellectual property policy and law (Research Question One), electronic forms of distance education (Research Question Two), and the ideological tenets and legal principles that define academic freedom (Research Question Three). Frequency data were used to describe what the overall sample, and faculty and administrator groups, reported knowing about each of the areas of research interest. To accomplish a more detailed description, statistical procedures were performed to identify associations between specific personal and job characteristics that may be related to respondents' knowledge about intellectual property policy and law, distance education, and academic freedom. To accomplish the latter purpose, several categorical variables were created including faculty rank, university designation, classification of academic discipline, race, gender, etc. To identify associations between participants' personal and job characteristics, and each of the issues raised in Research Questions One, Two, and Three, chi-square procedures were used (Schacht, 1995) when "distribution-free," nominal variables were considered. In cases when the sample was categorized into two groups to test for differences in dependent variables of an ordinal or interval nature, *t*-tests were performed (Gravetter & Wallnau, 2000). When comparison was made between more than two categorical groups, one-way ANOVAs were performed to test for differences in dependent variables of an ordinal or interval nature (Gravetter & Wallnau, 2000). An alpha of .05 was applied to determine significance in identified differences when group comparisons was made. Because the purpose of the study was descriptive and exploratory in nature, concerns about error adjustments were not considered critical and benefits of usual post-hoc tests to correct for Type I error were considered negligible against prospects for increasing Type II errors when multiple tests were performed

(Grimm & Yarnold, 2001). For these reasons, post-hoc tests were not performed when multiple tests were conducted.

Research Question Four asked: “What are the similarities and differences in knowledge between university faculty and administrators?” To prepare for analyses of the data that were relevant to this question, a test for internal consistency was performed on items in Section E (“Awareness of United States Copyright Law”) that corresponded to each of the ownership provisions provided by the law. Using the six items that asked about knowledge of each of the legal provisions, a Cronbach’s alpha was used as a reliability measure to “test the consistency across items” (Grimm & Yarnold, 2000). The result, $\alpha = .8851$, indicated that items were sufficiently related to form a single scale for measuring respondents’ knowledge of copyright. Similar reliability analysis was performed to test construct validity with the 10 items that identify distance education technologies and 11 items identifying support technologies commonly used in distance education included in Section F. The resulting Cronbach’s alpha ($\alpha = .8860$) indicated a reliable scale measurement composed of these 21 items. Likewise, scores from four items in Section G (“Awareness of the Concepts of Academic Freedom”) which corresponded to individual principles subsumed in definitions of academic freedom were analyzed. The results ($\alpha = .8206$) indicated sufficiently reliable construct validity among items to form a scale measure. Scores for the described items in each section (Section E, Section F, and Section G) were summed and new variables were created: “Copyright Familiarity,” “Distance Education Familiarity,” and “Familiarity with Academic Freedom.”

To provide answers for Research Question Four, *t*-tests were conducted to compare faculty and administrators’ mean scores on each of the scale measures. To determine whether

there was a relationship between the degree to which participants are engaged in faculty or administrative work, respondents were categorized into four groups that included “Teaching and/or Research Faculty,” “Teaching and/or Research Faculty with Some Administrative Responsibility,” “Administration with some Teaching and/or Research Responsibility,” and “Administration.” Using these categories, one-way ANOVAs were performed for each of the scale measures to determine differences and similarities between these groups. Results of these analyses are reported in Chapter Four.

CHAPTER IV

FINDINGS

Overview

This chapter begins with a description of the survey participants including university affiliation, academic department, rank, employment classifications, classification of academic discipline, age, gender, race, and so forth. Similar descriptions are provided for both faculty and administrator groups. To establish the degree to which respondents are engaged in production of legally protected forms of intellectual property, descriptions are provided of the forms in which faculty and administrators produce their research and scholarship, and their teaching materials. Further, a description is provided of respondents' knowledge about the proprietary nature of their work to establish their understanding of the value of their work products.

Following a description of respondents, their production of intellectual property products, and their understanding of the proprietary nature of their work, statistical findings are reported regarding respondents' knowledge in each of four areas of primary interest in the study:

1. Research Question One: What do university administrators and faculty know about laws and university policies regarding ownership of intellectual property products prepared for electronic distribution?
2. Research Question Two: What do university administrators and faculty know about electronic forms of distance education?
3. Research Question Three: What do university administrators and faculty know about the ideological tenets and legal definitions of academic freedom?

4. Research Question Four: What are the similarities and differences in knowledge between university administrators and faculty?

Respondent Profile

Of the 3375 surveys e-mailed to faculty and administrators, 413 completed surveys were returned electronically for an overall response rate of 12.2%. In spite of a few items not being completed on a small number of surveys, all of the surveys were considered useable. Aggregate data from all items were considered in analysis of each of the research questions.

Each of the selected universities was represented in the sample. School affiliations were reported by 368 respondents; 104 reported affiliation with the University of Florida, 73 with the University of Georgia, 117 with Louisiana State University, and 74 with the University of Tennessee. Each of the academic units in common was represented in the sample: Agriculture 70, Arts & Sciences 110, Business 23, Education 29, Veterinary Medicine 15, and Communications 17. Thirty-three additional respondents, identified as either full-time administrators not attached to a specific academic unit or faculty holding dual appointments, were also included in the study.

The average age of participants was 51 years. Of the respondents who reported gender, 122 were females, 270 were males. Of the respondents who self-identified race, 331 were Caucasians; eight were Hispanics; four were self-identified as African-American/Blacks; four were Asian or Asian American; two were Native American; and 24 were unclassified by race. Among the 297 respondents who indicated a level of academic rank, there were 69 assistant professors, 74 associate professors, 129 full professors, 17 instructors, and one guest lecturer. Seven respondents specified one of each of the following faculty ranks not listed in the survey

options: assistant scholar, courtesy professor, emeritus, dean emeritus, adjunct assistant professor, associate research professor, and senior lecturer.

Respondents' self-report of the nature of their employment fell into four categories. There were 261 respondents who described their employment responsibilities as "Teaching and/or Research Faculty." Of the 140 participants whose employment description included administrative responsibilities, 70 identified the nature of their employment as "Teaching and/or Research Faculty with Some Administrative Responsibilities;" 58 reported "Administration with Some Teaching and/or Research Responsibilities;" and 12 described the nature of their employment as "Administration." Since so few respondents were identified as employed exclusively as "Administration," no analysis was undertaken to determine within group differences among administrators participating in this study.

Faculty

From the 2501 surveys e-mailed to faculty, 261 completed surveys were received for a response rate of 10.4%. Faculty from all four of the selected schools participated. Complete surveys were submitted by 54 faculty members from the University of Florida, 52 from the University of Georgia, 75 from Louisiana State University, and 50 from the University of Tennessee. All academic ranks were represented in the faculty group including 68 who were identified as assistant professors, 62 associate professors, 106 full professors, and 17 instructors.

Faculty from each of the academic units was represented including 60 from Agriculture, 97 from Arts & Sciences, 21 from Business, 25 from Education, 14 from Veterinary Medicine, and 14 from Communications. Because the nature of research, scholarship, and teaching varies widely within each of the academic units represented, faculty respondents were re-grouped into

categories based on responses to a question that asked them to specifically identify “the name of the unit/division/discipline in which you primarily teach.” Based on responses to that question, data were re-coded to correspond to one of four categories including “hard-pure,” “hard-applied,” “soft-pure,” and “soft-applied.” These categories correspond to an adaptation used by Del Favero (2002) (Biglan, 1973) and are included as Appendix D. For the purposes of this study, two additional categories (“non-specific academic administrator” and “administrator”) were added to ensure categories were sufficiently inclusive of all participants in each of the faculty and administrator groups included in the study. When re-categorized based on the disciplines in which respondents indicated they teach (Table 3), the resulting distribution was expected based on the size of academic units to which disciplines are customarily assigned. For instance, the largest numbers of respondents fell into the “soft-pure” category, where disciplines such as English, history, and psychology are commonly located, and in the “soft-applied” category, where large departments such as education and business are usually found. Smaller numbers of respondents fell into the “hard-pure” category where hard sciences such as biology and chemistry are generally found, and in “hard-applied” disciplines that include such units as architecture, engineering, and forestry.

Faculty working full-time represented 94.3% of the “Teaching and/or Research Faculty” group that composed 63.2% of the sample; 3.4% reported working part-time; and .8% reported being on sabbatical. On average, faculty respondents reported having been a faculty member for 17.4 years. The average age of participating faculty is 50 years. From faculty participants who reported gender, 83 were females and 172 were males. Of the faculty who responded, 197 were Caucasians, six were Hispanics; four were African-American/Black, three were Asian/Asian-American, and one was Native American.

Table 3

Frequency Distribution of Faculty Based on A Taxonomy of Academic Discipline

Faculty (n = 261)	Frequency	Percent
hard-pure	58	22.2
hard-applied	51	19.5
soft-pure	92	35.2
soft-applied	60	23.0

Administrators

One hundred-forty of the 874 administrators who were surveyed submitted completed surveys for a response rate of 16%. Forty-nine administrators indicated they were employed at the University of Florida; 20 were from the University of Georgia, 40 were from Louisiana State University, and 24 were from the University of Tennessee. Administrators from each of the academic units in common were represented. Of the 32 administrators who indicated some teaching responsibilities, eight reported teaching subjects in Schools of Agriculture, 11 in Arts & Sciences, two in Business, four in Education, and one reported teaching in Communications. No responding administrators in Schools of Veterinary Medicine reported also having teaching responsibilities. Table 4 shows a frequency distribution of administrators based on the nature of their administrative and teaching responsibilities. The largest number of administrators indicated affiliation in Arts & Sciences, followed by education and schools of agriculture. With 67 respondents represented, the largest group of administrators fell into the “Administration with

Some Teaching and/or Research Responsibilities” group. The second largest group is “Teaching and/or Research with Some Administration.” Fourteen respondents are identified in the “Administration” group. Generally speaking, the distribution of administrators seems to reflect the size and organizational complexity that is usual in each of the six academic units that the universities included in this study share in common. For instance, the largest number of administrators in each category that describes the degree to which respondents are engaged in administrative duties is Arts & Sciences, which is also the largest and most complex unit at each of the universities in the study.

Table 4

Frequency Distribution of Administrators Based on Description of Employment Responsibilities

Academic Unit	Teaching and/or Research Faculty with Some Administration	Administration with Some Teaching and Research Responsibilities	Administration	Total
Administrators in Schools of Agriculture				
Count	8	5	1	14
Percent within agriculture	57.1	35.7	7.1	100.0
Administrators in Arts & Sciences (A&S)				
Count	38	38	9	85
Percent within A&S	44.7	44.7	10.6	100.0
Administrators in Business				
Count	6	4	2	12
Percent within Business	50.0	33.3	16.7	100.0

(table 4 continued)

Administrators in Education				
Count	10	10	2	22
Percent within education	45.5	45.5	9.1	100.0
Administration in Mass Communications				
Count	1	7		8
Percent within mass communications	12.5	87.5		100.0
Administrators in Veterinary Medicine				
Count	2	3		5
Percent within veterinary medicine	40.0	60.0		100.0

To allow for comparison with faculty counterparts, administrators were re-categorized within a taxonomy of academic disciplines. To ensure inclusive categorization of administrators, two additional categories were created: “Non-specific discipline academic administrators” and “non-academic administrators.” Table 5 shows a frequency distribution which indicates that the greatest number of administrators fell into the “soft-applied” classification of academic disciplines and the least number of faculty were in “hard-pure” disciplines. Eleven respondents fell into the non-academic administrator category, which included Chancellors/Presidents, Provosts, Chief Academic Officers, and so forth. Only three respondents were identified as “non-specific discipline academic administrators” which included positions such as deans of Graduate Schools. Again, these results appear to be an accurate reflection of the size and complexity of the organizational components generally expected in a university the size of those included in the study.

Table 5

Frequency Distribution of Administrators Based on Academic Discipline and Non-Academic Employment Status

Administrators (n = 140)	Frequency	Percent
hard-pure	24	17.1
hard-applied	25	17.9
soft-pure	33	23.6
soft-applied	44	31.4
non-specific discipline administrator	3	2.1
non-academic administrator	11	7.9

Of the administrators who reported academic rank, one was an assistant professor, 11 were associate professors, 18 were full professors. Administrators who reported the nature of their employment responsibilities included 70 who were self-described as “Teaching and/or Research Faculty with Some Administrative Responsibilities,” 58 “Administration with Some Teaching and/or Research Responsibilities,” and 12 were self-described “Administration.” The survey design allowed administrator groupings according to employment classification. Seven participants selected Group I: Chancellor/President, Provost, Chief Academic Officer, Associate Provost, etc.; 14 indicated Group II: Deans of Colleges/Divisions, etc.; and 111 were self-assigned to Group III: Associate/Assistant Deans, Chairs, Heads, Directors, Academic Program Coordinators, etc.

Administrators who indicated previous or current faculty status reported serving as a faculty member for an average of 19.5 years. Participant reports showed that administrators had served in administrative roles an average of 8.91 years. Twenty-five of the 27 administrators reporting indicated they were employed full-time by their universities; two indicated they are working as part-time university administrators.

On average, administrators were 54.4 years of age. Of the 132 responding administrators who reported their gender, 39 were females and 93 were males. Race was specified by 123 responding administrators; 113 were Caucasians, one was Asian or Asian-American, two were Hispanic; one was Native American. None of the administrators participating in the study indicated that they were African-American/Black.

Taken together, the descriptive findings relative to administrators responding to the survey appear to provide some evidence that the respondent sample may be a fair representation of the population of interest in the study. Generally speaking, the largest number fell into categories that corresponded to the largest organizational structures within the universities, the distribution in terms of the level in which respondents were engaged in administrative tasks seems to correspond to what might be expected in upper, middle, and lower level administrative structures, distribution in terms of faculty rank appears to reflect the career trajectory common to achieving higher ranking administrative positions, and distributions based on race and gender were expectable based what is generally known about race and gender representation in the academy (The Chronicle of Higher Education, 2003).

Research and Teaching Products

Research and Scholarship

The forms in which intellectual property (IP) materialize in the academic community were varied and included patents, inventions, and a range of copyrightable products. All classes of legally protected intellectual property listed on the survey were represented in the products produced by participants in the study. Respondents were asked to identify, with “yes” and “no” responses the forms of intellectual property in which their research and scholarship materialize. Table 6 provides details about the number of faculty and administrators whose research and scholarship materialize in each of the legally protected classes of intellectual property listed on the survey. Findings from a frequency distribution indicated that most often, the products of both faculty and administrators’ research and scholarship materialize in print form. However, no significant differences were found in the frequency with which both groups reported producing products in these forms including academic publications ($X^2(1) = 3.673, p = .055$), literary works ($X^2(1) = 1.425, p = .233$), or confidential information ($X^2(1) = 2.417, p = .120$). Highly specialized forms of intellectual property were reported least frequently, but no significant differences were found between the frequency with which faculty and administrators reported producing these products which included plant varieties ($X^2(1) = 3.267, p = .071$), circuit layouts ($X^2(1) = 1.726, p = .189$), and sound recordings ($X^2(1) = 1.334, p = .248$). Likewise, no difference in frequency was found between faculty and administrators’ reports that their research materialized in any other copyrightable form including videos or films ($X^2(1) = .862, p = .353$), musical compositions ($X^2(1) = .201, p = .654$), or artistic works ($X^2(1) = .353, p = .553$), computer programs ($X^2(1) = .037, p = .847$), or multimedia works ($X^2(1) = 1.762, p = .184$). Overall, these findings suggest

that there is little difference in the research pursuits of faculty and administrators who engage in scholarly inquiry. Consequently, it might be expected that both groups would have interest in intellectual property issues.

Table 6

Number of Respondents Producing Research and Scholarship in Legally Protected Forms of IP

Forms of Legally Protected IP	Employment Category		Total
	Faculty (n = 261)	Administrators (n = 140)	
Literary works	45	31	76
Academic publications	244	137	381
Patentable inventions	31	14	45
Confidential information	24	20	44
New plant varieties	6	0	6
Circuit layouts	4	5	9

(table 6 continued)

Computer programs	30	17	47
Multimedia works	42	30	72
Other works in digital form	40	24	64
Sound recordings	6	1	7
Videos or films	24	17	41
Artistic works	6	2	8
None of the above	6	1	7

In addition to identifying the frequency with which intellectual products were produced in the course of research and scholarship, the data were analyzed to identify job or personal characteristics that may be related to production of any of the various types of intellectual products. The job characteristics that were considered included university designation, classification of academic discipline, and faculty rank. The personal characteristics that were examined included race and gender. Age was not considered separately, because the effects of age were considered subsumed in faculty rank, and faculty rank was considered a richer descriptive variable for all that is implied in accomplishing academic rank. Because the sample

data consisted of frequency distributions (distribution-free, nominal variables), the chi-square test was used (Gravetter & Wallnau, 2000) in this stage of data analysis.

Job Characteristics and Scholarly Products. Very few differences were found between the universities included in the study in terms of the frequency with which the various types of intellectual products were produced. However, results of a chi-square showed a significant difference based on university designation and the number of respondents who indicated they produced none of the intellectual products listed in the survey ($X^2(3) = 7.823, p = .05$). A total of five respondents from Louisiana State University and one from the University of Florida indicated that they do not produce any forms of intellectual property listed on the survey. A significant difference ($X^2(3) = 12.457, p = .006$) between universities was also found in the frequency with which production of “artistic works” was reported. No respondents from Louisiana State University reported creating “artistic works” compared to five from the University of Georgia, and one each from the University of Florida and the University of Tennessee. Though these numbers are small and the questions are outside the scope of this study, this finding raises questions about differences between universities in culture, funding, values that favor artistic expression, and other variables that may explain the difference.

Respondents in the various classifications of academic disciplines were found to be remarkably alike in the frequency with which they created each of the intellectual products listed in the survey. The few differences that were identified were in patentable and technology products. Chi-square values showed that respondents in “hard” pure and applied disciplines were significantly more likely to produce patentable inventions ($X^2(5) = 68.246, p < .01$), computer programs ($X^2(5) = 25.142, p < .01$), and circuit layouts ($X^2(5) = 14.258, p < .05$).

When faculty rank was considered some distinct differences were identified. Table 7 shows a frequency distribution of the rates of production of each type of intellectual product by faculty rank. A significant difference ($X^2(5) = 32.728, p < .001$) based on faculty rank was found in the frequency of contribution to academic publications. Specifically, full professors were shown to contribute to academic publications more frequently than respondents in all other faculty ranks combined. A similar significant difference was found between faculty ranks and production of multi-media works ($X^2(5) = 12.125, p = .033$) and sound recordings ($X^2(5) = 51.355, p < .001$). Again, the frequency with which full professors reported producing teaching materials in these forms was greater than all other faculty ranks combined.

Respondent Characteristics and Scholarly Products. When gender was considered, men were found to be significantly more likely than women to produce patentable products ($X^2(1) = 7.652, p = .006$), computer programs ($X^2(1) = 6.641, p = .01$), and videos and films ($X^2(1) = 5.082, p = .024$). Further analysis of the data showed that women are significantly under-represented ($X^2(5) = 18.19, p < .05$) in “hard” pure and applied disciplines and within the full-professor faculty rank ($X^2(5) = 40.626, p < .05$). These findings suggest that it is possible that the lower frequency with which women reported producing some types of intellectual products may not be accounted for exclusively by gender, but that the types of academic disciplines they choose and the level of rank they achieve may be factors as well. The comparison of women and men’s reported contributions to academic publications, on survey item # 1, adds some weight to this proposition. Since academic publications were the most common form in which scholarship was reported to materialize across ranks and academic disciplines, it is noteworthy that there was not a significant difference in women and men’s reported contributions to academic publications ($X^2(1) = 1.124, p = .289$).

Table 7

Frequency of Production Forms of Research Products by Faculty Rank

Forms of Research Products	Employment Category					
	(n = 297)					
	Assistant Professor	Associate Professor	Full Professor	Instructor	Guest Lecturer	Other
Literary works	11	10	32	2		1
Academic publications	69	68	123	11	1	8
Patentable inventions	6	11	22			1
Confidential information	5	13	15	2		
New plant varieties	1		5			
Circuit layouts	2	5	1			1
Computer programs	9	12	11	3		3
Multimedia works	11	16	18	6	1	3

(table 7 continued)

Other works in digital form	12	13	20	3	1
Sound recordings		1	4		1
Videos or films	4	12	14		1 2
Musical compositions			1		
Artistic works	3	2	1		
None of the above		1		5	

Likewise, race was found to make no significant difference ($X^2(5) = 13.138, p = 00.969$) in the frequency with which respondents contributed to academic publications. However, race was found to be a factor in the frequency with which respondents' scholarly products materialize in some other forms. Specifically, whites were significantly more likely to produce patentable inventions ($X^2(5) = 13.138, p < .001$), confidential information ($X^2(5) = 11.503, p = .042$), and new plant varieties ($X^2(5) = 33.642, p < .001$) than counterparts in other racial groups.

Teaching Materials

Table 8 provides a detailed account of the number of faculty who reported creating teaching materials in each of the legally protected forms listed on the survey. The results of a

frequency distribution showed that the largest number of both faculty and administrators reported producing teaching materials in print form. When frequency rates for information technology products were examined, 112 of faculty and 54 of administrators reported including Internet and other digital forms of publication in their teaching. Computer presentations were used by 184 of faculty and 108 of administrators. Additionally, 44 faculty and 24 administrators reported using computer programs in the course of teaching. Additionally, the data were analyzed to determine relationships between the types of intellectual products that respondents reported creating, and their job and personal characteristics.

Job Characteristics and Teaching Materials. Results of chi-square procedures showed there was no significant difference ($X^2(3) = 3.042$; $p > .05$) between the universities in terms of the frequency with which respondents reported producing teaching materials in any of the forms listed on the survey. However, significant differences were found between faculty ranks in creation, use, or distribution of sound recordings ($X^2(5) = 12.584$, $p = .028$) and computer presentations ($X^2(5) = 12.751$, $p = .026$). Specifically, full professors were significantly more likely to create, present, or distribute these forms of teaching materials than their counterparts in other faculty ranks.

Table 8

Number of Respondents Producing Teaching Materials in Legally Protected Forms of IP

Forms of Legally Protected IP	Employment Category		Total
	Faculty (n = 261)	Administrators (n = 140)	
Print (notes, overheads, etc.)	248	131	379

(table 8 continued)

Video or film	103	53	156
Sound recordings	47	22	69
Musical compositions/arrangements	11	8	19
Computer presentations	184	108	194
Computer programs	44	24	68
Multimedia works	60	41	101
Other works in digital form	112	54	166
Artistic works	15	7	22
Other	13	2	15

Respondent Characteristics and Teaching Materials. When gender was considered, male faculty were found to include computer presentations ($X^2(1) = 4.422, p = .035$) in their teaching materials significantly more frequently than women, and women incorporated artistic works in teaching significantly more frequently ($X^2(1) = 4.678, p = .031$) than men. Similar to the findings related to scholarly and research products, the difference in frequency with which men and

women report producing specific types of teaching materials is likely more a function of the types of academic disciplines they choose. Similarly, no significant differences were shown based on the highest degree held by respondents, indicating that respondents holding a Ph.D. were no more likely than their counterparts with masters degrees or other doctorates. Likewise, the length of time respondents had served as faculty members had no significant influence on the frequency with which they reported producing teaching materials in any of the copyrightable forms listed on the survey. Consequently, it appears that the frequency with which respondents reported creating copyrightable products in the course of their teaching was more a function of their work than any personal traits or characteristics.

Knowledge of Intellectual Property

Descriptive data indicated that survey respondents produced intellectual products in a variety of legally protected forms. It is not surprising then, that the term “intellectual property” was familiar to 96.5% of all 261 responding faculty and 95.7% of the 139 administrators who responded. Only one faculty member and five administrators reported they were not familiar with the term. Eight faculty and one administrator indicated they were familiar with the term, “but have forgotten to what it refers.”

Familiarity with Legally Defined Forms of Intellectual Property

Data showed that respondents were not only widely familiar with the term “intellectual property” but that a majority recognized the proprietary nature of each of the legally defined classes of intellectual property listed in the survey. A crosstabulation of the data shown in Table 9 provides a detailed description of respondents’ familiarity with legally defined classes of intellectual property. The greatest number of faculty and administrators reported being familiar with copyright (393), patents and inventions (389), and trademark (359). Both groups reported

being least familiar with more specialized forms of intellectual property such as circuit layouts (93), and plant breeder's rights (90).

Table 9

Crosstabulation of Respondents' Familiarity with Legally Defined Classes of IP

Legally Defined IP	Employment Category		Total
	Faculty (n = 261)	Administrator (n = 140)	
Patents and inventions			
Yes	252	137	389
No	9	3	12
Copyright			
Yes	255	138	393
No	6	2	8
Designs			
Yes	144	90	234
No	117	50	167
Trademarks			
Yes	235	124	359
No	26	16	42

(table 9 continued)

Confidential information			
Yes	130	78	208
No	131	62	193
Circuit layouts			
Yes	62	31	93
No	199	109	308
Plant breeder's rights			
Yes	66	24	90
No	195	116	311
None sound familiar			
Yes	1		1
No	260	140	400
Total	261	140	401

Sources Credited with Increasing Familiarity with Intellectual Property

When participants were asked to identify the sources of information that increased their familiarity with legally defined classes of intellectual property, a variety of sources were credited. From a list of specified information sources, the greatest number of faculty (188) and administrators (119) credited their universities with informing them about the various types of

intellectual property. Colleagues were reported second most frequently as a source of information about intellectual property. However, “other” information sources were also credited including articles in academic and scholarly publications and their faculty union (the University of Florida is the only university included in the study that has a faculty union). Others reported learning about forms of intellectual property because the subject was related specifically to their particular academic discipline, through independent research on the subject, or as part of a process of protecting their own work. Some administrators indicated learning about forms of intellectual property in the course of their administrative work. Table 10 provides a more detailed account of how frequently respondents credited information sources listed in the survey with increasing their knowledge of legally defined intellectual property. These results suggest that the manner in which members of the academy are informed about the proprietary value of their work is somewhat haphazard, and this raises questions about the accuracy of their knowledge and the depth of their understanding.

Table 10

Information Sources Credited with Increasing Awareness of the Forms of Intellectual Property

Sources of Information	Employment Category		Total
	Faculty	Administrator	
	(n = 261)	(n = 140)	
University of employment	188	119	307
Another institution	50	32	82

(table 10 continued)

The media	137	76	213
A government agency	37	22	59
A research funding source	57	27	84
A colleague	109	49	158
Other	31	16	47

Research Question One

The first question in this study asked “What do university faculty and administrators know about university policies and laws regarding ownership of intellectual property products prepared for electronic distribution?”

Awareness of University Intellectual Property Policies

Compared to 96.3% of all respondents who reported familiarity with the term intellectual property, only 79.8% were aware that their universities had policies related to ownership of intellectual products. Of the 259 faculty who responded, 76.8% indicated they are aware of their university’s intellectual property policy compared to 85.6% of the 140 responding administrators. Results from a chi-square, ($X^2(399) = 6.157, p = .046$), indicated that administrators reported knowing that their universities have intellectual property policies with significantly greater frequency than their faculty counterparts.

Sources Credited with Increasing Familiarity with University Policy

Frequency data indicated that the “university” was the most frequently credited source of information about university intellectual property policies. The greatest number of respondents

(154) reported learning about university intellectual property policies from university print publications. University Internet publications were reported by 106 respondents as having increased their awareness of university policy. The fewest number of participants (75) credited university workshops with increasing their knowledge of universities’ policies. However, the second most frequently credited source was “colleagues.” These findings raise questions about the reliability and accuracy of the information sources faculty rely on for information about university policies. The degree to which those within the university community are accurately informed has certain implications. Further findings in this study may suggest what groups may be relied on as accurate informants about the issues of concern in this study. Table 11 provides a detailed account of frequency with which respondents credited each of the sources listed in the survey with increasing their knowledge about policy. Again, respondents appear to get most of their information from internal sources, and from one another. These findings support the aims of this study to better understand what faculty and administrators know about proprietary issues, especially in light of the fact that they appear to often be learning from one another.

Table 11

Information Sources Credited with Increasing Awareness of the Universities’ IP Policy

Sources of Information	Employment Category		Total
	Faculty (n = 261)	Administrator (n = 140)	
The policy statute itself	53	32	85
A colleague	66	46	112

(table 11 continued)

University workshops	43	32	65
University print publications	100	54	154
University Internet publications	63	43	106
Other	37	27	64

Obligations to Report Intellectual Property

Ninety-seven of the 261 responding faculty reported they were aware that university policies oblige them to report intellectual property that they create. Sixty-four faculty reported they were generally aware of a reporting obligation, but could not recall policy details, while 37 faculty reported they were not at all aware of policies that oblige them to report intellectual property products. Of the 140 administrators who responded, 76 reported knowing about policy obligations to report intellectual property; 30 reported being familiar with the policy, but unable to recall the details; and 14 reported they were not aware of reporting policies. Administrators were aware of reporting policies significantly more frequently ($t(316) = -2.490, p < .05$) than their faculty counterparts.

Allocations of Intellectual Property Rights

A six-point Likert-type scale, ranging from strongly agree to no opinion, was used to measure the degree to which respondents' reported familiarity with the way university policy allocates intellectual property rights in research and teaching materials. Of the 197 faculty who responded, only 25 indicated with certainty that they have some familiarity with the way in which policy allocates ownership rights compared to 27 of the 122 responding administrators. Twenty-

six faculty and 13 administrators indicated they have little, if any, knowledge about the way policy allocates intellectual property rights in research and teaching. Table 12 provides a more detailed account of participants' reported familiarity with the way university policy allocates rights to intellectual property created in the course of research and teaching. Results of a *t*-test showed that faculty and administrators did not differ significantly ($t(317) = -.806, p > .05$) in their reported familiarity with the way university policy allocates intellectual property rights. Consequently, it seems fair to speculate that neither group is significantly more knowledgeable about their universities' policies. Since such policies surely help define the working relationship between faculty and administrators, accurate knowledge about institutional policies may be critical to avoiding misunderstanding and tensions within the academic community.

Table 12

Familiarity with Policy Elements that Allocate Rights to Intellectual Property

Familiarity with how policy allocates rights to IP	Employment Category		Total
	Faculty (n = 197)	Administrators (n = 122)	
Strongly agree	25	27	52
Agree	120	27	52
Neutral	23	15	38
Disagree	22	10	32

(table 12 continued)

Strongly disagree	4	3	7
No opinion	3	3	6

Perceptions of University Policies

Six-point Likert-type scales, ranging from strongly agree to no opinion, were used to measure respondents' perceptions of problems posed by the policy; and their perceptions of the effectiveness of university procedures to inform faculty about policy and intellectual property issues related to teaching and research.

Perceptions of Problems Posed by Universities' IP Policy. Faculty and administrators did not differ significantly ($t(319) = .167, p > .05$) on the question of whether university intellectual property policies are problematic for them. The majority of both faculty (52.9%) and administrators (61.5%) reported that the policies posed few problems concerning the intellectual property they create. Eight faculty and three administrators indicated that the policies do pose some problems, and 38 faculty and 23 administrators were either neutral or had no opinion on the question. More detail regarding respondents' perceptions of the degree to which policies were reportedly problematic is shown in Table 13.

Perception of Effectiveness of Procedures to Inform about IP Policy. Forty-three percent of respondents' reported favorable opinions about the procedures universities used to inform faculty and administrators about their intellectual property policies. Although general perceptions seemed largely unfavorable, administrators were significantly less negative ($t(316) = 2.965, p < .01$) about universities' effectiveness in informing faculty about policies that regulate

Table 13

Respondents' Perception That IP Policy Poses Problems

IP policy poses few problems	Employment Category		Total
	Faculty (n = 199)	Administrator (n = 122)	
Strongly agree	38	33	71
Agree	99	53	152
Neutral	30	14	44
Disagree	16	10	26
Strongly disagree	8	3	11
No opinion	8	9	17

ownership of intellectual products. Overall, however, data reported in Table 14 show that a fairly even number of participants indicated either a critical perception of informational procedures, or were either neutral or had no opinion about the procedures universities use to inform faculty and administrators about the policy.

Table 14

Respondents' Perceptions of Universities Procedures for Providing Policy Information

University has effective procedures	Employment Category		Total
	Faculty (n = 199)	Administrator (n = 122)	
Strongly agree	8	22	30
Agree	69	39	108
Neutral	54	27	81
Disagree	45	25	70
Strongly disagree	11	8	19
No opinion	10		10

Intellectual Property Law

The products that university faculty create in the course of research, scholarship, and teaching are protected under provisions of the U. S. Copyright Law. The law provides guarantees and specifies the limitations of intellectual property ownership. Given the potential

importance of these legal protections, it is noteworthy that only 62.1% of the 261 responding faculty reported that they have some familiarity with copyright law, and that 13.4% reported that they are familiar with the law, “but have forgotten to what it refers.” A slightly higher percentage of administrators were familiar with the U. S. Copyright Law. Of the 140 administrators who responded, 73.6% reported they have some familiarity with the law, while another 10.7% reported that their familiarity is so remote they have “forgotten to what it refers.”

Importance of Ownership Rights for Research and Scholarship Products

The U. S. Copyright Law and traditions of academic freedom that are expressed in university policies specify rights conveyed to authors and creators of intellectual property. These specified rights refer to the following:

1. The ability or right to publish.
2. Personal financial rewards in addition to salary where there is successful commercialization of the research.
3. Acknowledgment of creative contributions, including authorship.
4. Participation in negotiations with third party sponsors.
5. The ability to have continuity in research with future employers (portability of research).
6. The ability to have control or approve changes or adaptations that are made to creative contributions.

Faculty and administrators were asked to rank the importance of each of these rights with respect to products of their research and considerable agreement was indicated in their responses shown in Table 15. The data show that both groups ranked the “right to publish” as most important;

“acknowledgment of creative contributions” was ranked second in importance; and the “ability to control or approve changes in research” products was ranked the third most important ownership provision. Faculty ranked “financial rewards” as more important than administrators, and administrators ranked the ability to have “continuity in research with future employers” (portability of research) higher than their faculty counterparts. Both groups ranked “participation in negotiations with third party sponsors” as the least important right granted authors by the U. S. Copyright Law.

Although rankings of each of these rights were similar between faculty and administrators, results of a series of t-tests showed that administrators have stronger attitudes about some of these rights. Specifically, administrators ranked the right to publish significantly higher in importance ($t(393) = -2.118, p < .05$). Likewise, administrators gave significantly higher ratings of importance to “the ability to negotiate with third parties” ($t(373) = -2.062, p < .05$), the right to maintain “continuity in research” ($t(1) = -3.456, p < .05$), and the right to control changes to scholarly products ($t(388) = -2.120, p < .05$) than their faculty counterparts. These rights suggest that respondents who have administrative responsibilities may have a higher estimation of the value or importance of intellectual products. The fact that most administrators in the study were currently engaged in teaching, scholarship, and research as well adds weight to a hypothesis that more seasoned members of the academy have greater experience to appreciate the value of their work and the importance of control and portability with regard to their intellectual products.

Table 15

Respondents' Ratings of Rights of Copyright Regarding Research Products

Rights of copyright regarding research	Ranking							
	1	2	3	4	5	6	7	
	Least						Most	
	Important						Important	
Right to publish								
Faculty (n = 257)	1	1	2	7	15	35	196	
Administrators (n = 138)			2	1	2	16	117	
Financial rewards								
Faculty (n = 254)	14	19	29	41	45	46	60	
Administrators (n = 139)	3	11	23	20	25	32	25	
Acknowledged contribution								
Faculty (n = 256)	1	2	3	13	37	90	110	
Administrators (n = 139)		1	1	11	10	42	74	
Right to negotiate								
Faculty (n = 240)	13	52	44	40	32	39	20	
Administrators (n = 135)	9	20	20	16	28	23	19	

(table 15 continued)

Portability of research							
Faculty (n = 256)	18	29	37	42	32	43	55
Administrators (n = 137)	4	15	9	15	21	22	51
Right to control changes							
Faculty (n = 253)	3	16	18	32	56	45	83
Administrators (n = 137)	4	4	5	13	28	21	62

The Importance of Ownership Rights for Teaching Materials

The same legal provisions in U. S. Copyright Law and university policies that define authors' rights regarding their research products can extend to protection of teaching materials. Respondents' rankings of ownership rights relative to teaching materials they create were similar to rankings for research products and are shown in Table 16. Faculty and administrators agreed that the "right to publish" was most important. Both groups ranked "acknowledgment of their creative contributions" as the second most important right conferred by copyright law. The "ability to control or approve changes or adaptations" was ranked third most important by both groups. While faculty ranked "financial rewards" as the fourth most important of the ownership rights conferred in copyright, administrators ranked it as fifth most important. Inversely, administrators ranked "continuity in your research with future employers" as fourth most important, while faculty assigned a fifth-place ranking to this copyright provision. The two groups agreed that ability to negotiate with third parties was the least important item with respect to ownership of teaching materials.

When the importance of ownership rights with respect to teaching materials were ranked, there were fewer significant differences between faculty and administrators than when research and scholarly products were at issue. However, administrators ranking were significantly higher than their faculty counterparts for the “right to negotiate with third parties” ($t(369) = -2.095, p < .05$) and the “right to control changes in teaching materials” ($t(386) = -2.101, p < .05$). These results indicate that administrators believe more strongly than faculty that faculty should have the right to control changes made to their teaching materials and negotiate commercial contracts that would result in profits from their teaching products.

Table 16

Respondents’ Ratings of Rights of Copyright Regarding Teaching Materials

Rights of copyright regarding teaching	Ranking						
	1	2	3	4	5	6	7
	Least				Most		
	Important				Important		
Right to publish							
Faculty (n = 257)	3	1	6	19	36	46	146
Administrators (n = 137)	1	3	2	7	10	23	91
Financial rewards							
Faculty (n = 258)	14	19	32	39	47	46	61
Administrators (n = 138)	2	12	14	21	23	36	30

(table 16 continued)

Acknowledged contribution							
Faculty (n = 257)	1		5	24	35	79	113
Administrators (n = 137)	1	4	2	10	15	33	72
Right to negotiate							
Faculty (n = 240)	14	57	39	38	22	46	24
Administrators (n = 131)	8	18	21	16	22	29	17
Portability of research							
Faculty (n = 252)	18	37	37	29	29	53	49
Administrators (n = 136)	8	18	21	16	22	29	17
Right to control changes							
Faculty (n = 253)	4	9	25	36	43	51	83
Administrators (n = 135)	4	5	5	12	21	29	59

Research Question Two

The second research question in the study was “What do university faculty and administrators know about electronic forms of distance education?”

Familiarity with Distance Education

Descriptive data show that participants are almost universally familiar with the term “distance education.” Of the 261 faculty who responded, 256 reported they are familiar with the

term compared to 137 of 140 responding administrators, and the frequency with which the groups indicated familiarity with distance education was not significantly different ($X^2(2) = 1.515, p > .05$). From the same number of respondents, 36.4% of faculty and 37.9% of administrators reported that they create teaching materials for use in distance education. These findings suggest that not only is there widespread familiarity with universities' expanded distance education initiatives, but there is a sizable amount of intellectual property products being created for use in distance education. The findings are also consistent with the growth in distance education initiatives that is reported in the literature (The Chronicle of Higher Education, 2003; McIsaac & Gunawardena, 1996; National Center for Educational Statistics, 1998; Reasons, 1999).

Although participants from different universities did not differ in the frequency with which they reported creating teaching materials for use in distance education, significant differences ($X^2(5) = 15.856, p = .007$) were identified between faculty ranks with 38 full professors and 37 associate professors reporting they create materials for distance education compared to 23 assistant professors and one instructor. Similarly, when a Chi-square was performed, a significant difference ($X^2(5) = 19.516, p < .05$) was found between academic disciplines with 52 respondents from "soft applied" disciplines reporting they prepare intellectual products for distance education compared to 35 from "hard applied," 31 from "soft pure," and 25 from "hard pure" disciplines. No significant association was found between race and creating teaching materials for distance education ($X^2(5) = 3.590, p > .05$). Likewise, there was not a significant relationship ($X^2(1) = .448, p > .05$) between gender and the frequency with which respondents reported creating intellectual products for use in distance education. In other words,

it appears that the more experienced faculty in “applied” disciplines are more likely to incorporate technology into their instructional methods. These findings are somewhat unexpected when the nature of soft-applied disciplines is considered. Because of their “concern with life systems” (Biglan, 1973), it seems somewhat paradoxical that educators in disciplines such as psychology, sociology, education, and human development may be increasingly mediating instruction about the interpersonal nature of human relationships through electronic technologies.

Awareness of Distance Education Technologies

Two primary forms of technology are commonly used in distance education:

Technologies that are used to convey instruction, and supportive technologies that facilitate communication or link students to educational resources. To achieve a more detailed picture of the scope of respondents’ familiarity with distance education, participants were asked to report their familiarity with a range of synchronous and asynchronous technologies in each of these categories.

Findings reported in Table 17 show that a majority of respondents were familiar with most of the information technologies used in distance education; only one faculty member reported not being familiar with any of the technologies listed. The types of technology that respondents reported familiarity with most frequently were broadcast/cable TV (369), videotape (362), and compressed video (339). These findings are consistent with reports in the literature that technology is increasing integrated into methods and delivery of instruction (The Chronicle of Higher Education, 2003).

Table 17

Number of Respondents Familiar with Delivery Technologies Used in Distance Education

Technologies used to convey instruction in distance education	Employment Category		Total
	Faculty (n = 261)	Administrators (n = 140)	
Videotape	233	129	362
Broadcast/cable t.v.	241	128	369
Satellite, microwave of IFST	191	115	306
Compressed video	215	124	339
Video streaming	174	105	279
Audiocassette	197	105	302
Audio conferencing	176	99	275

(table 17 continued)

CD-ROM	211	114	325
Integrated delivery	201	112	313
Audio streaming	135	74	209
None sound familiar	1		401

Results shown in Table 18 indicate that a majority of respondents were familiar with most of the supporting technologies listed in the survey that are used in distance education. The greatest number of respondents were familiar with the Internet and the World Wide Web. The fewest number of respondents were familiar with groupware and netnews.

Using all items that asked about familiarity with each of the primary instructional and support technologies used in distance education, a Cronbach's alpha was used as a reliability measure to "test the consistency across items" (Grimm & Yarnold, 2000). The results ($\alpha = .8860$) indicated that the 21 items formed a reliable scale measurement. Scale scores were used in analyses to determine associations between respondents' knowledge of distance education and certain job and personal characteristics. No significant differences were found in mean scores based on faculty rank ($F(5) = 1.224, p < .05$), classification of academic discipline ($F(5) = 2.205, p > .05$), or university designation ($F(3) = .485, p > .05$). Consequently, it seems that professors in all ranks and disciplines, and across all of the universities in this study are similarly familiar

with the technologies used to convey instruction and support distance education. Likewise, no significant differences were shown in mean scores based on race ($F(5) = 1.106, p > .05$) or gender ($t(390) = .987, p = > .05$). However, mean scores were significantly higher ($t(402) = -5.922, p > .05$) for respondents who reported they create teaching materials for distance education ($M = 17.23$) compared to those who reported they did not ($M = 14.78$).

Table 18

Number of Respondents' Familiar with Supportive Technologies Used in Distance Education

Technologies used to support instruction in distance education	Employment Category		Total
	Faculty (n = 261)	Administrators (n = 140)	
E-mail	259	139	398
List/Proc providers	224	126	350
Netnews	90	53	143
Newsgroup	178	89	267
Chat	219	126	354
Computer conferencing	173	105	278
The Web	254	133	387
CD-ROM	211	114	325

(table 18 continued)

Intranet	141	78	219
Internet service	170	106	276
Groupware	70	54	124

Research Question Three

Research question three asked “What do university faculty and administrators know about the ideological tenets and legal definitions of academic freedom?”

Familiarity with Academic Freedom

Of the 261 faculty who responded, 244 reported they were familiar with the term “academic freedom,” nine reported they were not familiar with the term, and four reported they were familiar, “but have forgotten” to what the term refers. Of the 140 responding administrators, 132 reported they were familiar with the term while six reported they were not. Two administrators reported they were familiar with the term “academic freedom,” but had forgotten to what it refers. These data suggest that a large majority of respondents were familiar with the general concept of academic freedom.

Although no significant difference ($X^2(10) = 5.294, p > .05$) was found in respondents’ familiarity with the concept of academic freedom based on classification of academic discipline, a significant difference was found based on faculty rank ($X^2(10) = 41.508, p = .01$). One-hundred percent of full professors reported familiarity with the concept compared to 97.1% of associate professors, 91.1% of assistant professors, and 70.5% of instructors. In other words, the higher the

faculty rank achieved by respondents, the more likely they were to report being familiar with the concept of academic freedom.

Respondents differed significantly in the frequency with which they reported familiarity with academic freedom ($X^2(6) = 13.630, p = .034$) based on the university at which they were employed. A total of 98% of the respondents from the University of Florida reported being familiar with the concept compared to 97.2% of respondents from the University of Georgia, 94.8% from Louisiana State University, and 86.4% from the University of Tennessee. Differences between respondents' familiarity with the concept of academic freedom based on university designation are similar to the differences found between the number of Ph.D.s employed by each university (see Table 2). When data were analyzed based on "highest degree earned," a significant association ($X^2(12) = 72.700, p = .01$) was found. Together, these findings suggest that differences in respondents' knowledge of academic freedom may be more a function of their education and academic rank than where they are employed. When individual, personal characteristics were considered, respondents did not differ in their familiarity with academic freedom based on race ($X^2(80) = 51.300, p > .05$) or gender ($X^2(16) = 26.235, p > .05$).

Authorities that Confer Academic Freedoms

Although the majority of faculty and administrators indicated they believe that the primary authority guaranteeing academic freedom is university policies, data shown in Table 19 indicate that participants were aware that protection for academic freedom flows from other authorities as well. However, both faculty and administrators indicated least frequently that they believe academic freedom is protected by provisions in the U. S. Constitution.

Table 19

Authorities Respondents Credit with Providing Protections for Academic Freedom

Authorities that provide protections for academic freedom	Employment Category		Total
	Faculty (n = 261)	Administrators (n = 140)	
University policies	223	124	347
AAUP	121	70	191
U. S. Courts	113	67	180
U. S. Constitution	62	30	92

Familiarity with Legal Principles of Academic Freedom

A series of four questions was used to identify respondents' familiarity with the rights that are commonly used to legally define academic freedom in the courts. A six-point Likert-type scale (response choices ranging from unfamiliar to very familiar) was used to measure the level of respondents' familiarity with each of these legal tenets including the (a) right to full freedom in research, (b) full freedom in publication, (c) full freedom in the classroom, and (d) full freedom from censorship. Although the majority of respondents indicated some level of familiarity with each of the pivotal rights that form a common legal definition for academic freedom, the frequency data in Table 20 show that greatest number of respondents (381) reported

some level of familiarity with freedoms associated with research, compared to reported familiarity with freedoms associated publication (348), censorship (347), and the classroom (338).

A significant difference ($F(5) = 4.762, p < .05$) in general knowledge about academic freedom was found within the ranks of faculty respondents. Although full-professors reported they were familiar with the concept of academic freedom significantly more often than respondents in other ranks, on the scale that measured respondents' overall knowledge of the legal concepts that define academic freedom, full professors' mean score ($M = 7.55$) was lower than other groups including assistant professors ($M = 8.52$), associate professors ($M = 7.93$), and instructors ($M = 11.71$).

Table 20

Respondents' Reported Familiarity with Rights which Legally Define Academic Freedom

Legal Rights Defining Academic Freedom	Very familiar	Familiar	Somewhat familiar	Somewhat unfamiliar	Unfamiliar	Not at all familiar
Freedom in research						
Faculty (n = 258)	124	100	26	5	3	0
Administrators (n = 140)	74	46	11	6	3	0
Freedom in publication						
Faculty (n = 257)	85	101	40	19	9	3
Administrators (n = 139)	47	61	14	10	6	0

(table 20 continued)

Freedom in classroom						
Faculty (n = 258)	76	101	38	30	10	3
Administrators (n = 140)	57	45	21	8	7	2
Freedom from censorship						
Faculty (n = 257)	81	93	50	19	10	3
Administrators (n = 140)	52	51	14	9	10	4

Allocation of Rights of Academic Freedom with Respect to Teaching

In addition to research, publication, and free speech rights, the courts have acted to ensure faculty rights to decide who is taught, what is taught, and how to teach. These rights form the legal standard for academic freedom in relation to teaching. Though the courts have made efforts to tease apart and clarify the degree to which these rights are conferred on the faculty as a collective body or as individuals, faculty and administrators' perceptions of their rights may be more impressionistic than informed by knowledge of statutory and case law.

Six Likert-type survey items (response choices ranging from strongly disagree to strongly agree) were used to measure respondents' perception that each of these rights is both an individual right and a collective right. Frequency data shown in Table 21 indicate that faculty agree more strongly than administrators that "how to teach" and "what to teach" are rights of individual faculty members. Further, the data indicate both groups agree more frequently that "what to teach" is a collective, rather than individual, faculty right. Though these findings are generally unremarkable, it is worth noting that a majority of respondents reported they are "very

familiar” with customary and legally protected academic privileges (AAUP, 2001, Lucas, 1996; Rosovsky, 1990).

Table 21

Respondents’ Perceptions of Allocation of Academic Rights Related to Teaching

Academic rights related to teaching	Individual faculty right		Collective faculty right	
	Agree	Disagree	Agree	Disagree
How to teach				
Faculty	91.0%	3.8%	36.9%	45.4%
Administrators	79.1%	4.3%	42.4%	38.2%
What to teach				
Faculty		76.3%	10.9%	61.9%
Administrators		61.9%	26%	61.9%
Who will be taught				
Faculty		16.3%	68.5%	38.5%
Administrators			72.8%	34.1%
		13.6%		

Note: Faculty (n = 261)

Administrators (n = 104)

Sources of Information Credited with Increasing Knowledge about Academic Freedom

Although there may be many reasons for differences in faculty and administrator perceptions about rights related to academic freedom, the information sources from which

each group derives their knowledge may account for some differences. While faculty most frequently credited “colleagues” with increasing their awareness of academic freedom, administrators most frequently reported learning about academic freedom from university publications. The American Association of University Professors (AAUP) was the second most frequently credited source of information for faculty, and the third most frequently credited by administrators. Faculty least frequently relied on university workshops for information about academic freedom, whereas administrators reported least frequently that they learned about academic freedom while a student. Table 22 shows frequency data that provide details about the frequency with which each group credits a variety of sources with increasing their awareness of academic freedom. To determine whether there were differences in how administrators and faculty learned about academic freedom, a series of *t*-tests were performed to compare differences in the two groups’ reports. Results, shown in Table 23, indicated that university administrators are significantly more likely to credit university sources of information for increasing their awareness about academic freedom than their faculty counterparts. However, no significant differences were found between the frequency with which faculty and administrators credited other information sources listed on the survey including colleagues, AAUP, and required coursework as a student. In addition to sources indicated in survey items, respondents identified a range of “other” information sources as contributing to their awareness of academic freedom including a variety of professional journals and print publications, service on various university committees, independent research, and faculty labor union (University of Florida is the only university represented in the sample that has unionized faculty).

Table 22

Frequency Respondents' Credit Information Sources with Increasing Awareness of Academic Freedom

Information sources	Employment Category		Total
	Faculty (n = 261)	Administrators (n = 140)	
A colleague	98	59	157
Required coursework	40	16	56
University workshops	28	26	54
University print publications	60	61	121
University Internet publications	24	23	47
AAUP	78	48	126
Other	69	33	102

Table 23

t-tests for Information Sources Credited with Increasing Awareness of Academic Freedom

Information Sources	df	t-value	Std. Error Difference	Probability
University workshops	399	-2.201.	-7.84E-02	.028*
University print publications	399	-4.371	4.71E-02	.001*
University Internet publications	399	-2.154	-7.23E-02	.032*

Research Question Four

Research question four asked “What are the similarities and differences in knowledge between university faculty and administrators?”

Differences in Familiarity with Intellectual Property Policy and Law

Results of a Chi-square, $X^2(397) = 4.765$, $p > .05$, indicated no significant differences between the numbers of faculty and administrators who indicated they have some familiarity with U. S. Copyright Law. To achieve a sense of the depth of understanding of the law that defines intellectual property ownership, a *t*-test was performed to test for significant difference between faculty and administrators’ scores on a scale measure of their familiarity with the major provisions in the U. S. Copyright Law. Results showed no significant difference ($t(384) = .761$, $p > .05$) between the faculty and administrator mean scores. In other words, faculty and administrators appear to share about the same level of understanding about the U. S. Copyright Law.

To determine whether there was an association between the degree to which participants’ were engaged in faculty or administrative work, respondents were categorized into four groups that included “Teaching and/or Research Faculty,” “Teaching and/or Research Faculty with

Some Administrative Responsibility,” “Administration with some Teaching and/or Research Responsibility,” and “Administration.” Using these categories and mean scores from the scale measuring knowledge about the U. S. Copyright Law, a one-way ANOVA was performed to determine whether there was significant difference between faculty and administrators’ knowledge of copyright law. The results showed that faculty scores ($M = 21.83$) were on average slightly higher than administrators’ scores ($M = 21.23$), but the difference was not statistically significant ($F(3) = .919, p > .05$). Although the difference between the two groups was not meaningful, mean scores suggest that overall, respondents’ command of the law that protects intellectual products is somewhat marginal. On the 42-point scale that includes responses ranging from “not at all familiar” to “very familiar,” average scores fell between “somewhat unfamiliar” and “somewhat familiar” response options. These findings give support to Scott’s (1998) assertions that members of the academy are not well informed about the issues that surround the intellectual property ownership debate that has developed out of distance education and technology initiatives.

To determine the influence of potential commercial gain on familiarity with copyright, respondents were asked to report their beliefs about such potential in regard to both research and teaching products. Response options to items that questioned the likelihood that research/scholarship and teaching “will have a potential commercial value or application” included “yes,” “perhaps,” and “don’t know.” When comparison was made between faculty and administrators, the two groups did not differ significantly ($X^2(2) = 1.178, p > .05$) in reporting their teaching materials may have potential commercial value. Results from a one-way ANOVA were used to compare participants’ scores on a scale measure of their general knowledge of copyright provisions based on their reported beliefs about the commercial value of their

scholarship and research. Results showed a significant difference ($F(2) = 3.353, p < .05$) between those who reported that their scholarly and research products have commercial value and those that do not. Specifically, participants who reported that the products of their scholarship have commercial value, or some prospects of profits, also reported a greater general knowledge of the provisions in the U. S. Copyright Law. Similarly, participants who reported that their teaching materials have commercial value also scored significantly higher ($F(2) = 3.067, p < .05$) in general familiarity with the U. S. Copyright Law. These findings suggest that participants who perceive that their research and teaching products have commercial value are more knowledgeable about the U. S. Copyright Law than their less entrepreneurial counterparts.

Because of the potential financial rewards that distance education is believed to promise, analysis of the data was performed to determine whether those who reported preparing teaching materials for distance education were generally more knowledgeable about intellectual property ownership law than those who do not. Although faculty and administrators did not differ significantly ($X^2(1) = .081, p > .05$) in reporting that they create teaching materials for distance education, there was significant difference ($X^2(33) = 47.542, p < .05$) in respondents' scores on the scale measuring general knowledge of copyright provisions that indicated that those who reported preparing teaching materials for distance education were generally more knowledgeable about the law that defines ownership of intellectual property. Consequently, it may be reasonably assumed that participants who actively participate in distance education and have greater knowledge of copyright provisions may be found within the ranks of faculty and administrators.

Differences in Familiarity with Distance Education

Of those who responded, 99.2% of faculty and 97.8% of administrators reported they were familiar with the term "distance education." Results from a *t*-test indicated that faculty and

administrators did not differ in the frequency with which they reported that they are “familiar with the term distance education,” ($t(396) = .1223, p > .05$). On a 21-point scale measuring general knowledge about distance education technologies, mean scores for faculty ($M = 15.38$) and administrators’ ($M = 16.06$) were similar, and no statistical significance was identified in the difference between the groups’ reported knowledge about technologies used to deliver and support distance education, $t(399) = -1.614, p > .05$. Consequently, it seems that both faculty and administrators reported having similar knowledge about distance education technologies. When data were analyzed to determine whether the degree to which respondents are engaged in academic or administrator work was associated with knowledge about distance education, no significant difference was identified ($F(3) = 1.177, p > .05$). However, scores for those who create teaching materials for distance education ($M = 17.2333$) were significantly higher ($t(402) = -5.922, p < .01$) than for those who reportedly do not ($M = 14.7756$).

Differences in Familiarity with Academic Freedom

A vast majority of respondents, 94.9% of faculty and 94.3% of administrators, reported they were familiar with the term “academic freedom,” and no significant difference was identified between the number of faculty and administrators who reported that they are “familiar with the term academic freedom,” ($t(397) = .363, p > .01$). However, on a 28-point scale that measured respondents’ general knowledge about the legal principles that define academic freedom, mean scores for both faculty ($M = 8.28$) and administrators ($M = 8.02$) fell between response categories that indicated respondents had either “no opinion” about or were “unfamiliar” with principles of academic freedom. Although faculty scores were slightly higher than administrators’, there was no significant difference in faculty and administrators’ general knowledge about legal principles that define academic freedom, ($t(395) = .675, p > .05$). These

findings are somewhat surprising, but serve to help explain that the debate over ownership of intellectual products that is described in the literature (Gorman, 1998; Scott, 1998, Simpson & Turner, 2001; Smith, 2002). It may be that ownership claims are rooted more in emotional attachments to work-products, hopes for financial gain, or an impressionistic sense of entitlement, than on accurate knowledge of the freedoms generally accorded to faculty.

When faculty rank was considered, the mean score on the scale measuring knowledge about academic freedom was even lower for respondents who had achieved rank as full professors ($M = 7.55$) than other ranks including associate professors ($M = 7.93$), assistant professors ($M = 8.52$), and instructors ($M = 11.71$). The difference based on faculty rank was significant ($F = 4.762, p < .05$) and suggests that those in higher ranks may have a more impressionistic sense of academic freedom than their counterparts in lower faculty ranks.

CHAPTER V

DISCUSSION

Overview

This chapter begins with a summary description of the objectives and the research design and methods used in this study. A discussion of the findings related to descriptive profiles of the respondents follows, along with discussion of the findings related to each of the primary research questions considered in the study. In addition, limitations of the study are examined, conclusions about the findings are drawn, and recommendations for further research are offered.

A Description of the Study

The purpose of the study was to identify what faculty and administrators know about some of the issues that surround ownership of new technology products produced for use in distance education. Because research universities are generally assumed to be on the “cutting edge” of developing new knowledge and products, and Land-Grant institutions have a historical outreach mission, the population of interest for the study was faculty and administrators at Research Extensive, Land-Grant universities. The study had four main objectives: a) To determine what faculty and administrators know about university policies and the provisions in the U. S. Copyright Law that governs ownership of intellectual products; b) to identify what faculty and administrators know about distance education technologies; c) to determine what faculty and administrators know about the traditions and laws that define academic freedom as a principle and practice that encourages creative thought and activity, and d) to identify the similarities and differences in faculty and administrator knowledge in each of the preceding areas of interest.

A survey method was used to collect data that would provide a description of the sample population; the types of intellectual property respondents produce in research and teaching; and various job and personal characteristics that may be related to respondents in each of the primary areas of interest in the study. To answer the questions posed in the study, the survey included items to measure respondents' awareness and familiarity with university policies; provisions of the U. S. Copyright Law; technologies used in distance education; and traditional concepts and legal tenets that are used to define academic freedom.

Respondent Profiles

A detailed description of the sample was reported from demographic data reported on the survey. Frequency data were reported for each of the areas of research interest. Additionally respondents were categorized by job characteristics (faculty rank, university designation, etc.) and personal characteristics (race, gender, etc.) and statistical procedures were performed to determine factors that may be associated with knowledge in each of the areas of interest in the study. Scale measures were developed to measure participants' overall familiarity with copyright law, distance education technologies, and defining tenets of academic freedom and comparisons were made between faculty and administrators' general knowledge in each of these areas of interest. Additional comparisons were made on scale scores to identify job and personal characteristic that are associated with respondents' overall knowledge of each of the areas of interest in the study.

Overall, the descriptive data for the population were consistent with descriptive profiles in literature (The Chronicle of Higher Education, 2003, p. 28) with respect to sex, age, faculty, full- and part-time employment, and range of activities in which faculty engage. Further,

descriptive data verified some commonly believed, but nonetheless, noteworthy findings. First, and consistent with data reported in the Chronicle of Higher Education Almanac Issue for 2003-2004 (p. 23), women and minorities were under-represented groups in the academic communities from which the sample was drawn for this study. This is a particularly interesting finding, because there were no remarkable differences in respondents' productivity of intellectual products or their knowledge in any of the areas of interest in the study. It seems that women and minorities continue to struggle to make a place within the academy in spite of their qualifications to do so. Secondly, average age of participants in the study was 51 years. Although the "graying" of faculty in the United States was not a focus of this study, and age was not a statistically significant factor in the findings, participants' average age does raise some interest in the need for faculty to stay current throughout their careers in an industry that is being transformed by both technology and public policy. These conditions suggest a need for more vigorous faculty development efforts on campuses.

More remarkably, findings in the study are consistent with national statistics reported in The Chronicle of Higher Education Almanac Issue of 2001-2002 (p. 28) that showed the line between faculty and administration, in terms of work functions, is more permeable and less clear than one might expect. Although 63.2% of respondents in the study indicated their employment responsibilities were exclusively confined to research and teaching activities, 16.9% who identified themselves as primarily teaching and research faculty also indicated they also performed some administrative responsibilities. Similarly, of the respondents who reported themselves primarily engaged in administrative work, only 2.9% indicated they have no research or teaching responsibilities at all. These findings are particularly interesting when considering

who is producing what types of intellectual products, for what purpose, and what they may know about the ownership issues that are emerging with distance education initiatives.

Results from the study indicated that respondents were, indeed, engaged in creative endeavors that result in all forms of copyrightable products, as well as patents and inventions. Most frequently, the products of respondents' intellectual work take print form in publications in academic journals. Similarly, teaching materials are most frequently produced in print form. However, when all types of technology products were considered together, the frequency with which these products were reportedly produced in the course of scholarship, research, and teaching was second only to products in printed form. The degree to which respondents in the study were found to be engaged in production of technology products and use of technology in teaching is consistent with what is expressed elsewhere in the literature (Baldi 2000; U.S. Department of Education, 1998) and provides some weight to the concerns that have emerged over ownership of intellectual products for use in distance education (Gorman, 1998; Rhoades, 2001; Sanoff, 2000; Scott, 1998; Simpson & Turner, 2001; Smith, 2002; Thompson, 1999; Welsh, 2000).

The few differences between universities suggest more about possible regional priorities and resource allocation than any remarkable institutional differences. The lack of any pattern of significant difference between universities suggests that academic personnel at all of the universities included in the study are heavily invested in creation and use of technology products, both in research and in teaching. From this finding, it may be supposed that ownership of these products would be of keen interest to all participants in the study.

Findings from statistical analyses indicate that respondents who are exclusively engaged in scholarship, research, and teaching do, in fact, create most of the intellectual products generated in the university communities considered in the study. However, it is very interesting to note that participants in the “administrator” group appear to make a heavy contribution to production in the areas of scholarship, research, and teaching. When respondents reported all of the categories in which their research and scholarship materialize, the frequency with which administrators reported creating intellectual products was more than 40% of what was reported by those identified exclusively as teaching and research faculty, though they composed less than 35% of the sample. In other words, those performing administrative duties are also making a large contribution to the universities’ scholarly endeavors. However, it is likely that this finding is a result of the fact that most administrators who participated in the study reported responsibilities below the level of deans in the administrative hierarchy, and therefore, hold positions that subsume expectations of scholarship.

What Respondents Know About Intellectual Property Law and Policy

Results indicated that both faculty and administrators are familiar with the proprietary nature of the creative products they produce and that, in large measure, they understand the major categories of intellectual products that are protected under the U. S. Copyright Law. Similarly, overall rankings of importance of the provisions in copyright law indicate that both groups believe the authorship protections provided by copyright are important. However, responses indicated that both groups were far more likely to get their information about intellectual property from the media or a colleague than other information sources, including the universities for which they worked.

Similarly, “colleagues” was reported second only to universities as a source of information about university policies. Fewer respondents indicated having learned about university policies from reading the policies than from other university publications or workshops on the issue. In fact, only 12.6% of faculty and 22.1% of administrators reported with certainty that they were aware of the way in which university policy allocates ownership rights for intellectual property, which is consistent with findings from an earlier study that found only 17.8% of all respondents understood policy provisions that allocate property rights (Monotti, 2002). The fact that so much of respondents’ knowledge about intellectual property and related university policies seems somehow second-hand seems remarkable and raises questions about how much of the current ownership conflict is a by-product of incomplete or inaccurate information, misinformation, or misconception.

In light of how few respondents indicated they had read the policy and were familiar with the way policy allocates ownership rights, it is remarkable that the majority of both faculty and administrators reported that the policy poses few problems for them and that as many as 43% of respondents indicated that the university has effective procedures for informing them about intellectual property policies. Respondents in a previous study appear to have been more critical, in that only 15.7% considered university procedures were effective (Monotti, 2002). Although it is not possible to surmise all of the factors which may account for similarities and differences between respondents in the two studies, it is likely that there are differences in the characteristics of governance systems and in national cultural norms which may partially explain why respondents in this study appear to be more charitable toward their university employers.

What Respondents Know About Distance Education Technologies

Because so many new forms of intellectual property and publication outlets have begun to emerge from distance education initiatives and programs in universities, it is not surprising that respondents across disciplines and universities were similarly aware of distance education. In fact, the majority of both administrators and faculty across all four universities were familiar with most of the information technologies used to facilitate teaching and learning at a distance. These results confirm assertions in the literature that information technologies have become increasingly integrated into higher education (Baldi 2000; McIsaac & Gunawardena, 1996; Reasons, 1999; U.S. Department of Education, 1998). Also expected, were results that confirmed that those who reportedly prepare materials for use in distance education were significantly more knowledgeable about distance education technologies than those who reported they did not. It is also worth mentioning that respondents who prepared materials for use in distance education also have significantly greater familiarity and knowledge of the copyright provisions that protect their intellectual products. No data are currently available to suggest the degree to which policy-makers are selected for these specific characteristics, but findings from this study suggest that policy decision-making related to intellectual products created for information technologies would be more informed if those who participate in distance education were heavily involved in the process.

What Respondents Know About the Tenets of Academic Freedom

While all of the universities in the study have instituted intellectual property policies that apply to information technology products, the debate over the fairness of these types of policies that make institutional claims on intellectual products continues to be argued in the literature.

Potential profits expected from information technology products that are emerging from distance education initiatives have added fuel to the debate over ownership. On one side is the argument that university ownership of these products is a means to recovering institutional costs associated with investment and support of new technologies. Opponents of this position argue that institutional claims of ownership violate traditions blanketed under principles of academic freedom and have a chilling effect on creative endeavor within the academy at large. Because this argument seems to rest on knowledge and understanding about what academic freedom is and is not, respondents in the study were surveyed about their knowledge in this area (Gorman, 1998). Since principles of academic freedom are considered essential to the academy as a stimulus for creativity and open thought, it was surprising to find that respondents were not universally aware of the term. On first glance, the data suggested that participants who hold the highest academic rank as full professors were an exception. Fully 100% of full professors reported they were familiar with the concept of academic freedom. However, when their general knowledge of the defining legal principles of academic freedom was tested, full professors' mean score was lower than all other academic ranks, including instructors. This result was perplexing because it suggests that those who had served the universities longest and achieved positions of authority may actually have a less accurate understanding of academic freedom than all other academic ranks on campus. However, the findings were consistent with assertions in the literature that the debate over intellectual property ownership is not likely an "informed" debate (Scott, 1998).

When the depth of their understanding was examined, results indicated that although a majority of respondents were aware of the concept of academic freedom, their understanding

appears to be somewhat impressionistic. Though most of the rights commonly perceived to define academic freedom including full-freedom in research, freedom in the classroom, and freedom from censorship, actually flow from provisions in the U. S. Constitution, which preceded university policies, the majority of respondents reported a belief that freedoms generally expected in academic communities are primarily provided for and guaranteed by university policy.

Participants' responses about academic rights in relation to teaching reflect some confusion whether these rights should be conferred directly to faculty or through the university. Faculty were far more frequently of the opinion, than their administrator counterparts, that the right to decide how to teach and what to teach is an individual faculty right. Although the courts have supported the Constitutional free-speech rights of individual faculty members, they have not rendered decisions that clearly delineate that individual rights in these matters takes precedence over collective rights of the academy. Although the courts have failed to clearly tease apart whether what is taught and how to teach are individual or collective rights of faculty, standardization that is required by most accrediting bodies seems to clearly establish that collective decisions are expected. Consequently, it is interesting that faculty seem to believe, even more strongly than administrators, that choices in these matters should be weighted toward individual rather than collective decision-making.

Differences in Faculty and Administrators' Knowledge

Although the findings intended to detail faculty and administrator knowledge about intellectual property law and policy; distance education; and academic freedom provide some insight, scores on scale measures of respondents' overall knowledge in each of these areas of

interest provided a broader perspective of differences and similarities between the two groups. In terms of knowledge about the law that defines intellectual property ownership, faculty and administrators were not found to differ significantly. However, mean scores for both groups indicated their knowledge in this area was, at best, only vague. Because participants indicated that most of their knowledge about intellectual property policy and law comes from second-hand sources, including university publications, colleagues, and the media, it was not surprising that their general knowledge in this area appeared to be fairly poor.

On a scale that measured respondents' general knowledge about distance education technologies, administrators' scores were slightly higher on average than faculty counterparts', but the difference was not statistically significant. Respondents who reported they created materials for use in distance education did have a significantly higher average score than for those who reportedly do not. Though this was an expected result, it was unexpected to find that participants who created teaching materials also had increased knowledge about copyright provisions that protect intellectual products. It seems, then, that participants who were more heavily engaged in teaching at a distance may be better prepared to participate in policy-making for more than one reason: First, they have first-hand knowledge of the technologies and forms that intellectual products take for information technology, and second, they appear to be more knowledgeable about legal provisions that provide ownership protections for those products.

One of the more interesting findings in the study was the degree to which respondents seemed ill-informed about the defining rights of academic freedom. Average scores on a scale measure of general knowledge about academic freedom were remarkably low for both faculty and administrators. Although faculty average scores were slightly higher than administrators',

the difference was both unimpressive and not statistically significant. When questioned about the precise legal tenets that are used as a standard for defining academic freedom, on average respondents in both groups chose “no opinion” and “unfamiliar” response options that indicated little, if any, actual concrete knowledge about the legal boundaries of academic freedom. These findings offer rather poor support for arguments that institutional claims on intellectual products threaten academic freedom and threaten to have a chilling effect on creativity in the scholarly community. Certainly, such an argument based on a clear understanding of traditions and legal definitions of academic freedom might be made, but if these findings may be generalized, it seems the current argument may be based more of wishful thinking and impression than concrete knowledge.

Potential Limitations of the Study

The study’s findings were limited to responses collected from participating faculty and administrators employed at each of four selected Research Extensive, Land-Grant universities. Consequently, the findings may only be generalizable to schools with similar descriptive profiles.

Additionally, it cannot be stated with certainty that results of the study represent “true” findings rather than an artifact of the sample. There are several reasons why the sample may have been problematic. First, the consent form included identification of the researcher as a Louisiana State University student, which may account for the higher response rate from that campus. Further, the consent form clearly identified the purpose of the study was to identify what university administrators and faculty know about electronic forms of distance education, intellectual property law and policy, and the tenets of academic freedom. It seems reasonable to suppose that these subjects would appeal to a limited group of potential respondents and those

who elected to participate may have been more interested and more knowledgeable in the areas of interest to the study than those who opted not to participate. These prospects raise concerns about possible response bias that may be a product of self-selection by those more enthusiastic and knowledgeable about the topics that were the focus of this study. To the degree that it is likely that the survey attracted more knowledgeable respondents, an upward bias in responses may have occurred. If it is the case that respondents were more knowledgeable than those who elected not to participate, it is possible that the resulting findings actually provide an inflated assessment of what faculty and administrators actually know about intellectual property policy and law, forms of distance education technology, and the defining tenets of academic freedom.

Second, because an “online” survey method was used, it may be that potential respondents who were unfamiliar with e-mail and computer technologies were less likely to respond. The prospects that some may have elected out of the survey based on online administration of the survey may have been increased by the fact that the survey was composed of 45-items that required a minimum of approximately 15-20 minutes. Depending on computer skills and reading speed, it is reasonable to assume that for some respondents completing the survey, which required several types of word-processing operations from “mouse-clicks” to typing responses into dialogue boxes, was a considerably more lengthy process. It is possible that the length of time and technical skills necessary to complete the survey may have been a deterrent to some potential respondents. It is also possible the return rate and response patterns may have been effected by technical difficulties. While the exact rate of technical difficulties is unknown, seven respondents did report being unable to complete the survey due to technical problems. Although it is a likely possibility that the technology used in the survey had

exclusionary effects, it is hard to say the degree to which that worked for or against the aims of the study. Because the purpose was clearly linked to investigating issues that have emerged from distance education, those who have access to computers and some basic knowledge of their use may have been most desirable for the purposes of the study. Consequently, sample size and the validity of the data may have been marginally influenced by the technology and by differences in computer skills of respondents.

Third, data collection occurred during summer months when many faculty are away from campus and their routine responsibilities. Although it is likely that many potential respondents continued to use e-mail during the summer respite, it is also likely that others did not. There was some indication of this prospect in the number of “automatic e-mail replied” that notified e-mail “senders” that potential participants were away from their offices and would not return mail until the fall term. In all, fewer than 20 such “automatic reply messages” were received. However, it cannot be excluded that even these few confirmations indicate the results were affected by the timing of data collection.

Taken together, the purpose of the study, use of online survey method, and the timing of the survey during summer months may be factors that help to explain the response rate (12.2%) achieved in the study. In spite of logical explanations, the rate of return may be a limitation that raises concerns about possible effects of selection bias on the validity of the results from this study (Schonlau, Fricker, & Elliott, 2001). To minimize the likelihood that a low return rate would have negative effects, specific measures were taken in sampling. Specifically, a large sample population (3375) was examined to ensure that a smaller ratio would still provide a sample that could reasonably be considered representative (Neuman, 1997). The fact that both

the respondent profiles and results from survey items related to specific research questions in this study appeared to be consistent with findings from other sources (The Chronicle on Higher Education, 2003; Monotti, 2002) provides some reassurance about the validity of findings in this study. However, it seems reasonable to recommend that a study that used both postal service and e-mail delivery of the survey could clarify the degree to which the findings in this study may be relied upon.

Finally, certain limitations in the data likely occurred as a consequence of survey design and the limited nature of the study. The instrument was a replication and expansion of a previous opinion survey (Monotti, 2002). The survey was designed to be very broad in scope and exploratory in nature. The results are likely to reflect a lack of depth to the investigation of any of the three primary areas of interest including respondents' knowledge of intellectual property policy and law, distance education technologies, and tenets of academic freedom. As a broad, exploratory survey designed to identify questions for further research, the study may have been successful. However, the study may not be assumed to be a thorough investigation into respondents' knowledge in any of the areas of primary interest in the study.

This limitation stands in bold relief when one considers that results from this study come from a survey that largely seeks opinions, rather than a true "test" of respondents' actual knowledge about the issues on which the study is focused. Scores from scale measures indicate that respondents' exact knowledge is far less than is indicated in their "opinions" about the degree to which they are familiar with intellectual property policy and law; distance education technologies; and tenets of academic freedom. The apparent discrepancies between what faculty think they know and what they actually do know about issues that surround intellectual property

ownership have certain implications for administrator training, faculty development programs, and curriculum development.

Conclusions

One of the original aims of the study was to provide some information that could be useful in making decisions about who may be best prepared to provide leadership in policy-making for distance education initiatives. An original assumption was that persons who are knowledgeable about copyright law and intellectual property policy; distance education; and the defining tenets of academic freedom would be best prepared to balance competing interests and resolve conflicts currently surrounding policy-making for ownership of intellectual policy. Findings suggest that it may be difficult to identify persons who have knowledge and clear understanding about all three of these issues.

However, if knowledge about U. S. Copyright law and distance education technologies are meaningful criteria for selecting parties to participate in decision-making, then those who have prepared materials for use in distance education may be best qualified. According to the study's finding, those who reportedly create materials for use in distance education were found to have greater knowledge in both areas: Knowledge of copyright law and knowledge of distance education. If expert knowledge about academic freedom would be useful to resolving some conflicts over intellectual property ownership, findings in the study suggest it is likely that universities will need to develop this expertise, which relates to another aim of the study.

The second aim of the study was to provide information that would influence universities' faculty and administrator faculty training and development programs. The debate that currently surrounds intellectual property ownership policy-making seems to echo other

debates wrapped in assertions about academic freedom that have occurred on university campuses for years. The findings in the study suggest that the current intellectual property debate--and others before it--may well be born out of misconceptions about what academic freedom is and is not. Remarkably, those who are most senior in the faculty ranks are likely to be most inaccurately informed about the liberties and limitations that come with academic freedom. In some respects, this bodes well for the academy. Faculty earlier in their careers and who have not yet climbed to the top of faculty ranks seem to have marginally better understanding of academic freedom. But in either case, faculty and administrator development programs to correct misconceptions may be useful. Certainly, institutions should approach such efforts gingerly to avoid expectable resistance, but it is reasonable to assume that developing expertise about academic freedom may go a long way in resolving current disputes and preventing others.

The final aim of the study was to provide information that may be useful in curriculum development for higher education leadership programs. The previous discussion provides sufficient rationale to suggest including course content that accurately informs students about the laws and traditions on which professional practices and academic culture is built. Developing future leaders with expert knowledge about laws and traditions that operate to stimulate research and teaching seems an important objective for preventing disputes that are disruptive to teaching and learning environments which universities strive to provide.

Implications for Application of Findings

Beyond general conclusions that correspond to original aims of the study, the findings suggest two likely possibilities about university faculty and administrators' knowledge about the areas of interest in this study that may have additional applied benefits. First, respondents'

familiarity and awareness of the issues in question appears to be somewhat superficial and imprecise. Second, those with greater knowledge are likely to be those with greater administrative responsibilities or more entrepreneurial interests; in other words, those with the greatest “need to know.” However, an argument may be made that because Land-grant, Research Extensive universities have special responsibilities and purposes, greater expectations should be imposed upon them in regard to issues of concern in this study.

Because of the outreach obligations of Land-grant universities, their commitments to distance education help to fulfill a historic legislative mandate. Consequently, interest, investment, and use of information technologies, and familiarity with laws and policies that regulate ownership and use of intellectual products published in alternate media should be of special interest. Additionally, Research Extensive universities are heavily vested with public and private funds intended to help them achieve special objectives and responsibilities as creators, conveyers, and stewards of human knowledge. Therefore, an argument may be made that these institutions hold exceptional fiduciary responsibilities that may be better fulfilled if faculty and administrators were universally better informed about issues related to ownership of intellectual property.

In some respects, information technology may be viewed as a catalyst for change within the academy on numerous levels beyond teaching, learning, and property ownership. On first blush, the issues considered in this study may seem minuscule compared to pressing problems universities experience from expanding demands and shrinking resources. However, in light of history that clearly shows that law makers and courts are willing--even if reluctant--to do the job of shaping academic culture through national policies and judicial decisions, these issues take on

greater proportions. A reasonable argument might be made that the price paid for the brand of quality and fairness that has resulted from reliance upon the government and the courts to answer critical questions and resolve crucial disputes that affect academic life is erosion of the freedoms necessary for universities to make those determinations for themselves. Because the academy is most expert about its own nature, it seems reasonable to expect that if well-informed it could, on its own, achieve better goodness-of-fit between its distinguishing values and traditions, and the demands of progress. Consequently, preparations made to meet challenges considered in this study may have farther reaching effects.

To successfully accomplish more universal knowledge of policies and laws that govern intellectual property ownership among faculty and administrators, universities might use as models the policies and procedures applied as checks and balances for insuring compliance with research ethics and standards. Such functions are usually achieved by standing, university wide committees. The permanency, prominence, and authority of these structures convey importance, and have certain effects on shaping universities standards and culture. Their importance is further signified by required procedures that “test” faculty knowledge of ethical research practices, grant rights to conduct research, and guarantee that those engaged in research are both well-informed and appropriately socialized.

In addition to creating permanent structures within the realm of the university at large, individual academic units within Land-grant, Research Extensive universities are well positioned to socialize new generations of academics to fit into the academy as it evolves to accommodate and harness information technology to serve its best aims. Required courses in pedagogy across the curriculum may incorporate knowledge about increasingly complex intellectual property

ownership laws and policies to better prepare new members of the professoriate. Such efforts may have broad effects as newly minted Ph.D.s are horizontally and vertically assimilated within the hierarchy of institutions that form the academy at large.

Recommendations for Future Research

Findings from the study suggest several avenues for future investigation. Nearly 40% of the respondents in the study reported that they prepare teaching materials for use in distance education. This finding suggests that research about distance education pedagogy is particularly worthwhile, and in recent years there has been a trend in the literature toward investigations of that nature. However, scholarly inquiry about policy and theory related to distance education, which was evident in the literature early in development of distance education, seems to have fallen by the wayside in favor of investigating methods and outcomes of teaching and learning (Rouke & Szabo, 2002). Though investigating issues that surround policy and theory are admittedly complex to deal with in research, the study hopes to re-stimulate scholarly interest in the policy issues that may emerge in distance education.

The study builds upon and confirms findings from a previous study that identified deficits in faculty knowledge about intellectual property law and policy, and weaknesses in institutional mechanisms used to inform faculty about university policies (Monotti, 2002). Results from the study were consistent with previous findings and suggest that universities need to develop other, more effective, routes for informing faculty and administrators about university policies. Further investigation of processes and procedures used to inform university personnel and develop knowledge and expertise would be helpful. Identifying systems and procedures that produce

effective results to accurately inform university personnel could provide a model that would increase knowledge and expertise and prevent disputes that arise from ill-informed personnel.

Although the study breaks ground in investigating knowledge resources about intellectual property law and policy, and tenets of academic freedom, more thorough investigation is needed. Because of the exploratory nature of the study, some aspects of the investigation of participants' knowledge in these areas were seemingly somewhat superficial. Consequently, further investigation to determine the exact nature of faculty and administrators' knowledge in these areas is needed as a basis for planning faculty and administrator development programs and for developing the curriculum in higher education leadership programs. The study serves as a step toward identifying strengths and weaknesses in knowledge resources in higher education and offers some information that may be useful for development of university personnel and future leaders in higher education.

An Agenda for Further Research

With regard to following the specific results of this study, several options are considered as most appropriate. First, application of the sample rotation principle which involves alternately surveying a number of potential respondents not included in the random sample for this may be used to confirm results were derived from a representative sample. Second, applying new measures that may serve as a better test of knowledge in each of the areas of interest in this study could be used to develop more precise and accurate information. Third, investigating institutional processes and procedures to identify effective models for informing personnel and developing expertise may be used to shed further light on subjects of interest in this study. Finally, conducting comparisons based on differences in institutional approaches to informing

university faculty and administrators and socializing personnel to respond to changes and challenges posed by transformations in research, scholarship, and teaching brought about information technologies may further enrich the value of this study.

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APPENDIX A
LOUISIANA STATE UNIVERSITY INSTITUTIONAL
REVIEW BOARD APPROVAL

Study exempted by
Louisiana State University
Institutional Review Board
203 B-1 David Boyd Hall
#5-578-8692
Robert C. Mathews, Chair

IRB #: 2299
Revised: 11/27/2002

LSU Proposal

LSU INSTITUTIONAL REVIEW BOARD (IRB) for 578-8692
HUMAN RESEARCH SUBJECT PROTECTION FAX 6792
Office: 203 B-1 David Boyd Hall

APPLICATION FOR EXEMPTION FROM INSTITUTIONAL OVERSIGHT

Unless they are qualified as meeting the specific criteria for exemption from Institutional Review Board (IRB) oversight, ALL LSU research/projects using living humans as subjects, or samples or data obtained from humans, directly or indirectly, with or without their consent, must be approved in advance by the LSU IRB. This Form helps the PI determine if a project may be exempted, and is used to request an exemption.

Instructions: Complete this form.

Exemption Applicant: If it appears that your study qualifies for exemption send:

- (A) Two copies of this completed form.
- (B) a brief project description (adequate to evaluate risks to subjects and to explain your responses to Parts A & B),
- (C) copies of all instruments to be used. If This proposal is a part of a grant proposal include a copy of the proposal and all recruitment material.
- (D) the consent form that you will use in the study

to:

ONE screening committee member (listed at the end of this form) in the most closely related department/discipline or to IRB office.

If exemption seems likely, submit it. If not, submit regular IRB application. Help is available from Dr. Robert Mathews, 578-8692, irb@lsu.edu or any screening committee member.

Ph: 337-989-4231 E-mail mpogue@lsu.edu Dept/Unit ELRC
(or 578-1019)

If Student, name supervising professor Rita Culross
Ph: 225-578-2208

Mailing Address 124 Canebroke Lane Ph 337-989-4231
Lafayette, LA 70508

Project Title A Comparison of Administrator and Faculty Self-Report and Knowledge of Distance Education, Related Intellectual Property Laws and Policies, and Tenets of Academic Freedom

Agency expected to fund project N/A

Subject pool (e.g. Psychology Students) University Administrators and Faculty

Circle any "vulnerable populations" to be used: (children <18; the mentally impaired, pregnant women, the aged, other). Projects with incarcerated persons cannot be exempted.

I certify my responses are accurate and complete. If the project scope or design is later changed I will resubmit for review. I will obtain written approval from the Authorized Representative of all non-LSU institutions in which the study is conducted.

PI Signature Mary S. Rene Pogue Date 4-28-03 (no per signatures)
=====

Screening Committee Action: Exempted Not Exempted
Category/Paragraph _____

Reviewer S. Kim MacGregor Signature S. Kim MacGregor Date 4/30/03

- 1 2 3 4 5 6 7
 personal financial rewards in addition to salary where there is successful commercialization of the research
 1 2 3 4 5 6 7
 acknowledgement of your creative contributions (e.g. authorship)
 1 2 3 4 5 6 7
 participation in negotiations with third party sponsors
 1 2 3 4 5 6 7
 ability to have continuity in your research with any future employer
 1 2 3 4 5 6 7
 the ability to control or approve any changes or adaptations that are made to your creative contributions
 1 2 3 4 5 6 7
 OTHER
 1 2 3 4 5 6 7

Q. 10b

If you assigned a rank of 1 or 2 to the selection OTHER, please specify the right to which you refer

(Type your answer between the brackets. Don't worry about extra spaces at the end of your response.)

OTHER:
 []

Please rank the following items with respect to how important you consider retaining each of these rights in relation to teaching materials that you create. Rank the items 1 through 7. 1=Most Important. Do not assign the same rank to multiple items.

Q. 11_A

(For each topic below, type an X between the brackets preceding your choice. Select only one choice per topic.)

- ability or right to publish
 1 2 3 4 5 6 7
 personal financial rewards in addition to salary where there is successful commercialization of the research
 1 2 3 4 5 6 7
 acknowledgement of your creative contribution (e.g. authorship)
 1 2 3 4 5 6 7
 participation in negotiations with third party sponsors
 1 2 3 4 5 6 7
 ability to have continuity in your research with any future employer
 1 2 3 4 5 6 7
 the ability to control or approve any changes or adaptations that are made to your creative contributions
 1 2 3 4 5 6 7
 OTHER
 1 2 3 4 5 6 7

Q. 11b

If you assigned a rank of 1 or 2 to the selection OTHER, please specify the right to which you refer

(Type your answer between the brackets. Don't worry about extra spaces at the end of your response.)

OTHER:

[]

E. AWARENESS of UNITED STATES COPYRIGHT LAW

Q. 12

I have some familiarity with the way in which United States Copyright Law allocates rights to intellectual property in research and teaching materials.

(Type an X between the brackets preceding your choice. Select only one choice.)

- Yes
- No
- Yes, but have forgotten to what it refers
- Don't know

The following are provisions of the United States Copyright Law. Please indicate your degree of familiarity with each item.

Q. 13_A

(For each topic below, type an X between the brackets preceding your choice. Select only one choice per topic.)

The right to reproduce the copyrighted work in copies or phonorecords.

Very Familiar Familiar Somewhat Familiar Somewhat Unfamiliar Unfamiliar Not at all Familiar NO OPINION

The right to prepare derivative works.

Very Familiar Familiar Somewhat Familiar Somewhat Unfamiliar Unfamiliar Not at all Familiar NO OPINION

The right to distribute copies or phonorecords of copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending.

Very Familiar Familiar Somewhat Familiar Somewhat Unfamiliar Unfamiliar Not at all Familiar NO OPINION

The right to publically perform copyrighted literary, musical, dramatic, and choreographic works, pantomines, and motion pictures and other audiovisual works.

Very Familiar Familiar Somewhat Familiar Somewhat Unfamiliar Unfamiliar Not at all Familiar NO OPINION

In the case of literary, musical, dramatic and choreographic works, pantomines and pictorial, graphic or sculptural works including the individual images of a motion picture or other audiovisual work, the right to display the copyrighted work publically.

Very Familiar Familiar Somewhat Familiar Somewhat Unfamiliar Unfamiliar Not at all Familiar NO OPINION

In the case of sound recordings, the right to perform the copyrighted work publically by a means of a digital audio transmission.

Very Familiar Familiar Somewhat Familiar Somewhat Unfamiliar Unfamiliar Not at all Familiar NO OPINION

- Netnews
- Newsgroup
- Chat
- Computer conferencing
- World Wide Web (www)
- Intranet
- Internet
- Internet service
- Groupware

Q. 18

Do you create teaching materials for use in electronic distance education?

(Type an X between the brackets preceding your choice. Select only one choice.)

- Yes
- No

SECTION G: AWARENESS of the concept of ACADEMIC FREEDOM

Q. 19

Are you familiar with the term academic freedom?

(Type an X between the brackets preceding your choice. Select only one choice.)

- Yes
- No
- Yes, but have forgotten to what it refers
- Don't know

Q. 20

Which of the following authorities provides guarantees of academic freedom? Please select all that apply.

(Type an X between the brackets preceding each choice you wish to select. Choose All That Apply)

- University policies
- American Association of University Professors (AAUP)
- The United States Constitution
- United States Courts

The following are principles of academic freedom. Please mark all that sound familiar.

Q. 21_A

(For each topic below, type an X between the brackets preceding your choice. Select only one choice per topic.)

Individual faculty members are entitled to full freedom in research, subject to adequate performance of their academic duties.

- Very Familiar
- Familiar
- Somewhat Familiar
- Somewhat Unfamiliar
- Unfamiliar
- Not at

all Familiar () No Opinion

Individual faculty members are entitled to full freedom in the publication of the results of their research, but research for financial return should be based upon an understanding with the university.

() Very Familiar () Familiar () Somewhat Familiar () Somewhat Unfamiliar () Unfamiliar () Not at all Familiar () No Opinion

Individual faculty members are entitled to freedom in the classroom in discussing their subject, but should limit introducing controversial material to that which is relevant to the course in that subject.

() Very Familiar () Familiar () Somewhat Familiar () Somewhat Unfamiliar () Unfamiliar () Not at all Familiar () No Opinion

When speaking or writing as a citizen, individual faculty are free from institutional censorship or discipline, but their special position in the community imposes special obligations. To be accurate, show respect for others' opinions, exercise appropriate restraint, and distinguish themselves as an individual citizen, not a university representative.

() Very Familiar () Familiar () Somewhat Familiar () Somewhat Unfamiliar () Unfamiliar () Not at all Familiar () No Opinion

Make one selection in respect to each statement.

Q. 22_A

(For each topic below, type an X between the brackets preceding your choice. Select only one choice per topic.)

Under principles of academic freedom, the right to determine who will be taught is a right of each individual faculty member.

() Strongly agree () Agree () Neutral () Disagree () Strongly disagree () No Opinion

Under principles of academic freedom, the right to determine what will be taught is a right of each individual faculty member.

() Strongly agree () Agree () Neutral () Disagree () Strongly disagree () No Opinion

Under principles of academic freedom, the right to determine how to teach is the right of each individual faculty member.

() Strongly agree () Agree () Neutral () Disagree () Strongly disagree () No Opinion

Under principles of academic freedom, the right to determine who will be taught is a right of the faculty as a collective body.

() Strongly agree () Agree () Neutral () Disagree () Strongly disagree () No Opinion

Under principles of academic freedom, the right to determine what will be taught is a right of the faculty as a collective body.

() Strongly agree () Agree () Neutral () Disagree () Strongly disagree () No Opinion

Under principles of academic freedom, the right to determine how to teach is the right of the faculty as a collective body.

() Strongly agree () Agree () Neutral () Disagree () Strongly disagree () No Opinion

Q. 23

Which of the following raised your awareness of the principles of Academic Freedom? Please select all that apply.

(Type an X between the brackets preceding each choice you wish to select. Choose All That Apply)

- [] Required coursework for my degree
- [] A colleague
- [] University workshops
- [] University print publications
- [] University Internet publications

APPENDIX C

CLASSIFICATIONS OF ACADEMIC DISCIPLINES

HARD-PURE	HARD-APPLIED	SOFT-PURE	SOFT-APPLIED
Astronomy	Architecture ³	Anthropology	Accounting
Atmospheric Science	Agronomy	Art ^{1 4 5}	Agricultural Economics
Biology	Animal Science ¹	Classics ¹	Allied Medical Professions ³
Biochemistry ³	Computer Science	Economics ⁴	Business ²
Biophysics ³	Construction Management ¹	English	Communications
Botany	Dairy Science	Fine Arts ¹	Community/Regional Planning ¹
Chemistry	Dental Science ¹	Geography ¹	Education
Entomology	Engineering	German	Adult/Continuing Education ¹
Environmental	Agricultural Engineering ¹	History	Agricultural Education ¹
Biology ³	Ceramic Engineering	History/Philosophy of Educ ¹	Educational Administration
Geology	Chemical Engineering ²	Modern Languages ¹	Education/Family Resources ¹
Math	Electrical Engineering ¹	Music ^{1 4 6}	Educational Psychology ¹
Microbiology	Industrial Engineering ¹	Philosophy	Elementary Education ¹
Physiology	Mechanical Engineering	Political Science	Industrial Arts Education ¹
Physics	Nuclear Engineering	Psychology	Secondary Education
Plant Pathology ¹	Food and Nutrition ¹	Russian	Special Education
Statistics ³	Food Science ¹	Sociology	Finance
Zoology	Forestry ¹	Speech Communications ¹	Health, P.E./Recreation ¹
	Horticulture		Human Development ³
	Medicine ^{1 2}		Journalism ¹
	Pharmacology ²		Law ¹
	Pharmacy		Management ¹
	Veterinary Science ¹		Marketing ¹
			Natural Resources
			Nursing
			Photography ³
			Public Administration ³
			Social Work ³
			Textiles/Clothing ¹
			Theater ³
			Vocational/Technical

Bolded model entries represent classifications in the original Biglan.

¹Classified by Creswell, Seagren & Henry's (1979) in their test of Biglan's model which added 43 disciplinary groups based upon classification by a panel of judges representing the four-year public higher education institutions in one midwestern state.

²Per Stoecker (1993).

³Per Malaney (1986). Classification was not the primary goal of Malaney's study so classification procedures were not adequately detailed. This is considered a limitation to classification.

⁴Identified as a soft-applied by Malaney (1986).

⁵Classified as hard-pure by Stoecker (1993).

⁶Classified as a soft-applied and a soft pure by Stoecker (1993).

APPENDIX D

CONSENT FORM

Survey of Distance Education and Intellectual Property Issues

Please review the following information. A link at the bottom of the page will take you to the survey.

1. Study Title: A Comparison of Administrator and Faculty Self-Report and Knowledge of Distance Education, Related Intellectual Property Laws and Policies, and Tenets of Academic Freedom

2. Study Site: This study is being conducted by a doctoral student at Louisiana State University and Agricultural and Mechanical College in Baton Rouge, Louisiana. The survey will be distributed using a dedicated World Wide Web address associated exclusively with the primary investigator.

3. Investigators: The following investigator is available for questions about this study, TWF, 9am-4pm by telephone; or weekdays, 8am-5pm by e-mail.

Rene Pogue, M.S.W. (Ph.D. Candidate)

337-989-4231

mpogue@lsu.edu

Dr. Rita Culross, Associate Dean (Supervising Professor)

Louisiana State University College of Education

221 Peabody Hall

Baton Rouge, Louisiana 70803

225-578-2208

4. Purpose of the Study: The purpose of this study is to identify what university administrators and faculty know about electronic forms of distance education, intellectual property law, university policies governing ownership of intellectual property products prepared for electronic distribution, and the tenets of academic freedom that have helped to promote creative thought and innovation of ideas and products.

5. Subjects: The population for this study is faculty members and academic administrators from four Land-grant universities in states that hold membership in the Southern Region Education Board.

6. Sample size: Approximately 400 participants.

7. Procedures: Subjects will spend approximately 15 minutes completing an on-line questionnaire about personal knowledge related to distance education, copyright law, university intellectual property policy, and concepts of academic freedom. In addition, respondents will be asked to identify general demographic information.

8. Benefits: There are no immediate benefits for the individuals who participate in the study. The possible benefits of this study are threefold. First, the results from this study are expected to be useful for making decisions about who may be best prepared to provide campus leadership in policy-making for distance education initiatives. Second, the proposed study has potential for influencing the development of universities' administrator and faculty training and development programs. Finally, it has possibilities for influencing the curriculum by suggesting content that may be added to higher education leadership programs.

9. Risks: The procedures associated with this study represent no more than minimal risk as there are no invasive procedures being performed, and there will be no individual identifying information requested or collected. Participants will be selected from public directories published on university operated Web-sites. All data will be collected through a Web-based format that does not identify the respondents' e-mail or computer web address. Data will remain in electronic format for analyses.

10. Right to refuse: Subjects may choose not to participate or to withdraw from the study at any time without penalty or loss of any benefit to which they might otherwise be entitled.

11. Privacy: Results of the study may be published, but no names or any other identifying information will be included in the publication. Subject identity will not be obtained through data collection procedures. Solicitation documents, including educational institution of respondent, will remain confidential unless disclosure is required by law.

12. Consent: This study will be distributed and collected entirely through electronic formats. Participants must select an electronic "consent" option to access the questionnaire. Electronic submission of the questionnaire will represent a second consent to participate in the study. Questionnaire submission is through a Web-based program (Survey Solutions XP©) and does NOT utilize or identify the respondents' e-mail or computer address.

If you have any additional questions regarding study specifics, you may contact the study investigator. If you have questions about subjects' rights or other concerns, you may contact Robert C. Mathews, Louisiana State University Institutional Review Board, (225) 578-8692.

[PROCEED TO THE SURVEY](#)

[IDON'T WANT TO PARTICIPATE](#)

APPENDIX E

LETTERS OF INTRODUCTION

Louisiana State University
A Dissertation Study for the
College of Education

Dear Colleague:

I am writing to request your participation in a dissertation study that is interested in exploring university administrator and faculty knowledge of some important intellectual property issues that surround distance education. Specifically, you are requested to complete an online survey that has been determined to take about 15 minutes to complete. The survey is self-administered online. The completed surveys are sent directly to a database file established by the student researcher. Your responses are anonymous, as there is no way to connect them with you when you electronically submit your completed survey.

The survey is formatted in two parts. The first part is a consent form that satisfies the Louisiana State University Internal Review Board requirements for research with human subjects. At the end of the consent form, you are requested to indicate your consent in order to proceed to the survey itself. Your final consent will be indicated once you complete and "submit" the survey located at the following site:

<http://www.renepogue.netfirms.com/survey/>

I appreciate your consideration and will be grateful for your time and participation.

Respectfully,

Rene Pogue, Ph.D. Candidate

Louisiana State University

College of Education

Dear Colleague:

I am writing this second letter to request your participation in a dissertation study. Results of the survey are expected to contribute to the emerging body of literature that investigates intellectual property issues which surround distance education. Specifically, results are expected to inform decision-making about selecting leadership for campus policy makers, influence university faculty and administrator training programs, and suggest curriculum content for higher education leadership programs. If you participated when the survey was first sent to you, thank you. If you were unable to complete the survey at that time, but are able to participate now, I will appreciate your help.

It has been determined that the survey takes about 15 minutes to complete. The survey is self-administered online. Completed surveys are sent directly to a database file established by the student researcher. Since there is no way to connect the survey with a sender once the survey is submitted online, your responses are completely anonymous.

The survey is formatted in two parts. The first part is a consent form that satisfies the Louisiana State University Internal Review Board requirements for research with human subjects. At the end of the consent form, you are requested to indicate your consent in order to proceed to the survey itself. Your final consent will be indicated once you complete and "submit" the survey located at the following site:

<http://www.renepogue.netfirms.com/survey/>

Results from the survey will be made available to anyone requesting them. An e-mail link to requests results is made available on the "thank you" page that follows the survey. I appreciate your consideration and will be grateful for your time and participation.

Respectfully,

Rene Pogue, Ph.D. Candidate

Louisiana State University

College of Education

VITA

Mary I. “Rene” Pogue is a native of Alabama. She received her Bachelor of Arts in Sociology and Master of Social Work degrees from the University of Alabama in her hometown of Tuscaloosa. As a professional social worker, she has worked as a forensic social worker for the Alabama Department of Mental Health, and as a therapist, clinical supervisor, and program developer for Family Counseling Services in both Tuscaloosa and Birmingham, Alabama. Since 1995 she has been a faculty member in the Louisiana State University School of Social Work as a full-time instructor. Her professional life as a social worker spans more than twenty years.

Her experience as a social work educator ignited her general interest in higher education and prompted her enrollment as a Ph.D. student in the Educational Leadership, Research, and Counseling program at Louisiana State University. As a social work educator, Rene’s interests have included community and organizational practice. Her interests in the impact of organizations on individual and community quality of life helped shape her research interests which include examining organizational policies and practices that effect professional work performance and, indirectly, quality of service and care in twin disciplines of social work and education.