3-5-1999

The Policy Perspective in Distance Education: A Futures Landscape/Panorama

James W. King
University of Nebraska-Lincoln, jking1@unl.edu

Dara Lacy

John McMillian

Keith Bartels

Michelle Fredilino

The Policy Perspective in Distance Education:

A Futures Landscape/Panorama

James W. King

with assistance from

Dara Lacy

John McMillian

Keith Bartels

Michelle Fredilino

Comments or questions:

James W. King
University Of Nebraska
300 Ag Hall
Lincoln, NE 68583-0709
402-472-3022
jking@unl.edu

The Policy Perspective in Distance Education: A Futures Landscape/Panorama

I. Introduction

This paper discusses distance education policy, specifically for Nebraska postsecondary institutions. Examples come from the Nebraska Community College System, Nebraska private colleges and universities, the Nebraska State College System, and the University of Nebraska system. While the pre-K to 12 educational system is not our objective, we will make some comments regarding linkages between them and the postsecondary institutions.

This draft paper includes a preliminary assessment of existing postsecondary distance education policies. We provide a general identification and analysis of policies and some initial conclusions and recommendations.

Several useful tools for distance education policy development will be presented. We also offer a modest framework to study distance education policy. We believe this simple structure or an adaptation of it may be a useful policy formation instrument. Other tools emerged as alternatives to this framework or as components of it.

II. Methods

To examine Nebraska postsecondary distance education policy, we conducted a mailed survey. Based on a review of the literature (King, Rockwell, and Russell, 1996), we developed a short instrument to collect written distance education policy documents of Nebraska postsecondary institutions. Distance education policy documents were defined as:

POLICIES: documents defined to include a written course of action (statutes, institutional missions, procedures, guidelines, regulations, or local work agreements). Excluded from the study are distance education course syllabi or program descriptions

Key areas of interest were: management, faculty, and students and is presented in Table 1.

We mailed the survey to all Nebraska postsecondary institutions except professional and trade schools.

When the surveys were returned, we grouped the into four postsecondary categories: University of Nebraska System, Nebraska State College System, Community Colleges, and private colleges and universities.

A second instrument (Gellman-Danley and Fetzner, 1998; Berge, 1998) was used to analyze the written policy documents (Table 2).

From this framework, we looked for themes and commonalities among the policies. We earmarked exemplary policies. In particular areas, we noted gaps and developed general lessons that might be applied to the development of distance education policy for post secondary institutions. Since the original review for this paper, Table 2 has been revised and expanded. Nevertheless, for this discussion, the framework presented above stands as the model of analysis.

Table 1: Categories in the Distance Education Survey Instrument	
Policy Area	**Indicators**
Faculty, including Extension:	Rewards (stipends, promotion & tenure, merit increases, and so forth) * Support (released time, student help, technical assistance, and so forth) * Opportunities to learn about technology (release time, and so forth) * Others
Students/Participants:	* College, department, or unit policy (Residency requirements, acceptance of courses from other places, transfer of credit, and so forth) * Support (access to technology, library resources, and so forth) * Others
Management and Organization:	* Curricula/individual courses (delivery modes, plans to develop, individual sequences, course development, entire program delivery and so forth) * Resources (financial resources to support distance education, courses, development, equipment, and so forth * Collaboration (with other Departments, units, institutions, consortia, intra-and inter-institutional) * Other

There are limitations to this study. The key constraint includes: that we collected only written policy. Because we defined policy only in its written form,

many departments and schools reported nothing. Nevertheless, some of these entities are known to have wide ranging distance education programs. "Informal" policy, not written, may be used to guide distance education programming. "Spoken," "understood," or "*de facto*" policy was not submitted under the survey criteria of "written policy." This would include distance education efforts sponsored by groups like the UNL's Departments of Educational Administration and Agricultural Economics, and the College of Business Administration's program for the Master in Business Administration.

Table 2: Distance Education Policy Analysis Framework

Policy Development Area	**Key Issues**
1) Academic	Academic calendar, course integrity, transferability, transcripts, evaluation process, admission standards, curriculum approval process, accreditation
2) Fiscal	Tuition rate, technology fee, FTE's, consortia contracts, state fiscal regulations
3) Geographic	Service Area Regional limitations, local versus outofstate tuition, consortia agreements
4) Governance	Single versus multiple board oversight, staffing, existing structure versus shadow colleges or enclaves
5) LaborManagement	Compensation and workload, development incentives, intellectual property, faculty training, congruence with existing union contracts
6) Legal	Fair use, copyright, faculty, student and institutional liability
7) Student Support Services	Advisement, counseling, library access, materials delivery, student training, test proctoring
8) Technical	Systems reliability, connectivity/access, hardware/software, setup concerns, infrastructure, technical support
9) Cultural	Adoption of innovation; acceptance of on-line/ distance teaching, recruiting, understanding of distance education (what works at a distance)

(Source: based on Gellman-Danley and Fetzner, 1998, and Berge, 1998)

III. Preliminary Results

The following brief survey results will highlight key events and will be given in general terms. Note: all schools and universities which use the NEB*SAT system have operating agreements. These agreements help determine priorities and are considered policy.

a. State college system: This includes Chadron State, Wayne State, and Peru State.

While Wayne State has some general guidelines, Chadron State is the most active distance education participant in the State College System. It has many distance education courses and activities, including participation with the Western Governors University. From a policy perspective, distance education guidelines exist for faculty (including staffing, workload, development incentives, and students [student training]). Chadron State also has formal distance education agreements with other schools it interacts with, such as community colleges and high school systems. In particular, these legal agreements help define fiscal arrangements, as well as other key procedures.

b. Private colleges and universities: The group consists of Bellevue, Grace, Clarkson, Concordia, Creighton, Doane, and others.

Creighton has a very active Pharmacy and Allied Health Professions programs. Bellevue is using "First Class" software for its distributed learning efforts. Concordia University has a large, national distance education program. Within the national Concordia system of 10 universities, there are many linkages with the sharing of courses; unfortunately, no formal written policies concerning these activities were submitted. Yet Concordia does have local multimedia training for its instructors. This training can be seen as support for faculty who might be doing distance education..

c. Community College System: Central, Metropolitan, Mid-Plains, Northeast, and Southeast, and Western.

The Community College System is a long-time user of distance education methods. For example, videotapes and self-instructional materials have been delivery methods for the target audiences of adult learners. Some of the policy areas the System covered included student orientation, instructor training, copyright, and class size.

d. University of Nebraska System: Four universities comprise this system; University of Nebraska at Omaha (UNO), Lincoln (UNL), and Kearney (UNK), and the UN Medical Center (UNMC).

UNK uses its continuing education policies as the distance education model. They also have faculty doing research on distance education groups or "learning communities.". UNO has library policies in place for their distance education offerings. UNO also has a distance education marketing plan. UNMC has a statewide distance education program in place with its nursing degree program. To manage this effort, the School of Nursing has position descriptions which incorporates distance education responsibilities.

UNL has many departments and college who submitted no policies, though they are producing distance education courses: Educational Administration, Agricultural Economics, the College of Engineering, and College of Business Administration. The College of Human Resources and Family Sciences uses the framework of the Graduate Division to structure their MS distance education program. UNL 's library has a .5 full time equivalent distance education support people.

IV. Discussion

From our analysis of the written policy documents, we developed these discussion items:

1. Where there is faculty and administrative interest in distance education, programs and courses are developed. This occurs with or without written policies. Conversely, were there is no faculty or administrative interest, distance education is not happening.

2. Thus, where postsecondary distance education activities exist, policies are developed. Where there is action, there is policy. This comes about because of need. Since there are linkages and collaborations, written policy is created out of necessity. Developed in this way, policy is not necessarily systematic; it is very pragmatic and targeted to areas of need.

3. Even though the policy is not deliberate, distance education policies are emerging throughout the postsecondary system. While some policies are written, no postsecondary institutional distance education policy covers all nine ar-

eas of the policy analysis framework. Thus, gaps in distance education policy exist at all levels in all institutions.

4. Some development models for distance education in postsecondary schools do emerge. The models are based on existing academic processes.

a. the continuing education model in which existing continuing education structure is the *actual* model for emerging distance education offerings;

b. the graduate school model in which an educational unit administratively structures a distance education program around what it must fulfill to meet the graduate school requirements.

5. Where there is a more systematic distance education policy, there is usually of a program of study or a series of activities versus a course or an offering. Because of the linkages within programs, a need for more formal connections arise and policies emerge. We might also make this statement for distance education programs that did not submit written policies. That is, even when there is not written policy, a *de facto* policy exists and provides guidance for distance education programs.

6. There are some major gaps in distance education policy. These gaps include; intellectual property, rural considerations, pre-K to 12 linkages; privacy issues; schedule/calendars and costs.

V. Comments on The Gaps

As we considered the implications of our review, we looked at the gaps in distance education policy. To help policy makers, we first focused on "intellectual property." Why is intellectual property an issue? "Companies that create value with digital assets may be able to reharvest them in an infinite number of transactions." (Rayport and Sviokla, 1995, 82)

a. Intellectual Property: I (The following is based on a longer paper by J. McMillian).

In recent years, one widely debated issue in higher education is university policies regarding intellectual property rights. In general, university policies are an attempt to clarify who owns the copyright to faculty-created works.

The arguments over who should receive copyright ownership are simple. Faculty believe that academic freedom mandates that they own the rights to their lecture notes, research, and authored writings, such as textbooks.

In addition, some professors purport that the most important issue is not ownership, but control. For example, Larry Press, a professor at California State University at Cominguez Hills, says he learned the risks of putting work on the web the hard way. Press and his students created a web site for the university's School of Management. At the end of the semester, however, when Press tried to call up the site, he received a "file not found" message. Unknown to Press, university administrators had closed down the site and created a new one for the school, incorporating some of the work that he and his students had created.

On the other hand, university officials can argue that on-line courses are essentially "works for hire," a long-standing legal concept that assumes than an employer can claim ownership of an employee's work. According to administrators, equity mandates that it is unfair to presume that professors retain all copyrights when much of the materials produces could not have been created without the help of university resources and equipment.

Perhaps in the center of the intellectual property arguments, however, is a middle ground where both universities and faculty share in the ownership and rights to on-line courses. Experts, for example, purpose that universities and the faculty sit down and negotiate an amicable agreement.

LEGAL OWNERSHIP

While the debate over who *should* own the intellectual property rights on faculty-created work remains a sensitive issue at many universities, the more problematic issue is who in fact *does* own the intellectual property rights.

Traditionally, universities have claimed ownership of the *patentable* inventions of its faculty members, but have not claimed ownership over any *copyright* works. Most faculty members, for example, have long been presumed to be the rightful owners over their self-authored textbooks. In the 1970's, however, a number of universities began to adopt written policies governing the ownership of copyrights in works created by faculty members. This trend has continued through the 1990's. Today, however, many colleges and universities still have no such written intellectual property policy or are in the process or developing one.

There are several important legal implications that hinge on whether a university has a written intellectual property policy. Due to the well settled belief that university's generally control patent ownership of faculty-created inventions, this section will exclusively focus on university policies in regard to copyright ownership.

WORKS-MADE-FOR-HIRE DOCTRINE

Under general copyright principles, the works-made-for-hire doctrine essentially mandates that ownership over employee-created works rests with the employer, or in this instance, the university. A possible exception to this general principle is what is often referred to as the "educational exemption." Under the educational exemption, if the work was created by a faculty member at an educational institution, the works-made-for-hire doctrine would not apply and ownership would vest in the faculty member. Unfortunately, there are many other factors, discussed below, that could impact this outcome.

WORKS-MADE-FOR-HIRE OUTCOMES

1.If a court determines that faculty-created works are *not* works-made-for-hire (in other words, there *is* an "educational exception") then the copyright ownership vests in the professor. Thus, the only way a university can obtain copyright ownership if the faculty-created work is if the faculty member transfers his/her ownership rights to the university in writing (*see* ß 204 (a)).

Exceptions. It is important to note that if the university has a written intellectual property policy in which the university claims copyright ownership, such a document may quality as a "writing" and *therefore could transfer the faculty member's copyright ownership rights to the university*. Typically, however, written university policies are not included verbatim in a writing signed by the faculty member and the university. If this is the case, the following addresses whether copyright ownership is then legally transferred to the university.

A. If the university policy is not signed by the university and the faculty member and if the university policy *is not* expressly incorporated by reference into a written employment contract, or other form of contract, the policy does not appear to satisfy the Copyrights Act's transfer of ownership requirements. Copyright ownership, therefore, would still reside with the faculty member.

B. On the other hand, even if the university policy is not signed by both parties, but the university policy *is* expressly incorporated by reference into a written contract signed by the faculty member and the university, the policy appears to

satisfy the Copyright Act's transfer of ownership requirements. Copyright ownership, therefore, would reside with the university.

2.Alternatively, if the faculty member's work *is* determined to be a work-made-for-hire (in other words, there *is not* an "educational exemption") the university would own the copyright (*see* ß 201 (b)).

Exceptions. If the university and the professor expressly agree to transfer copyright ownership in a written agreement, either before or after the judicial ruling, ownership can be transferred to the faculty member. For example, a signed written university copyright policy, or separate contract, which states that the ownership in faculty works shall belong to the professor would transfer the university's rights to the faculty member.

In conclusion, in the near future Congress and/or the courts interpreting the works-made-for-hire doctrine will have the greatest impact on the ownership of faculty-created work. In the interim, it is important to note that either a university policy, or the mere absence of a university policy does not necessarily equate to yielding ownership of all works to either party. Instead, ownership is determined by considering the Copyright Act, judicial precedent, any university policy, and other written agreements between faculty and the university. Moreover, despite an official act by Congress, or any judicial interpretation of the works-made-for-hire doctrine, universities and faculty members will still be afforded an opportunity to "reverse" copyright ownership outcomes by simply entering into a valid legal agreement.

WHY HAVE A UNIVERSITY POLICY?

Admittedly, the debate over intellectual property ownership is presently somewhat abstract. Few electronic course, if any, have become best sellers, or have even made much of a profit. But forecasters predict that to change in the near future. Unless administrators set policies on course ownership now, however, experts warn universities and professors may find themselves mired in legal battles.

Unfortunately, in many instances, university policies governing the ownership over copyright works have received unfair criticism. A well planned and drafted policy can be beneficial to both sides.

Because an institution may invest heavily in distance education courses and likely provided the infrastructure to present them, it may wish to control their use and dissemination in order to be certain it receives a return on its invest-

ment. Faculty who create the courses, however, may also desire control in order to preserve academic integrity, to fund further research, or to supplement tight salaries. Consequently, clear allocation of copyright ownership and control is critical to avoid conflicts.

If a university is developing a distance education policy, at a minimum the policy should address the following legal questions:

- Who owns copyright in distance education courses?
- Who may receive royalties from the assignment or licensing of distance education courses?
- What procedures should be followed to limit liability for infringement of copyright in the development of distance education courses?
- How and who is responsible for protecting the copyright of the distance education course?

SAMPLE UNIVERSITY POLICIES

Sample policies from numerous institutions may be found on the Internet at: http://www.cornell.edu/CPL/Policies/

DISTANCE EDUCATION OWNERSHIP MODELS

Universities and faculty members can form written agreements to dictate distance education ownership. The following are example ownership models that may be agreed upon.

Collective work model: Under this model, the university would own the entire program (i.e., collective work), while individual contributors would own their specific presentations. Unless contributors expressly transferred their rights to the university, it could only reproduce and distribute the program in its entirety and would be restricted in exploiting the various individual contributions.

Joint work model: This model recognizes ownership for a "joint work" in which multiple contributors merge their ownership into a single, inseparable work. The course, therefore, would be considered jointly created and each contributor would hold joint ownership. Joint owners are allowed to individually exploit the entire course, subject to a proper accounting from the other owners for profits earned from the work. This status, however, complicates the granting of exclusive rights in the works to third parties.

b. Intellectual Property: II (The following is also based on a longer paper by J. McMillian).

The Copyright Act is 23 years old. While parts of the Act have been amended since its passage in 1976 to accommodate new technologies and concepts, the basics of copyright law have remained fairly constant. The issue facing policy-makers today, therefore, is whether the copyright basics retain their vitality in the face of emerging technologies.

Intellectual property ownership problems will mostly likely materialize when audience size or revenue potential increases. In order to ensure that distribution rights will not be limited to the initial transmission, agreements should expressly state that the owner is authorized to copy and distribute programming for "any and all purposes" and "by means of any and ell existing technologies and any all technologies hereinafter created."

WHAT CAN WE LEARN AT UNL?

The marriage of new technology and traditional teaching methods creates unique opportunities and challenges for entities involved in distance education. On of the biggest challenges will be to order the relationships between instructors, the university and other contributors. At the same time, these parties must prevent and protect their works against copyright. There are numerous legal protections available to defend intellectual property. Distance education programs, for example, should protect their creations with applicable patents, trademarks, copyrights, and policy guidelines for use and distribution.

The molding of new technology and traditional teaching methods increases unique opportunities and challenges for entities involved in distance learning. One of the biggest challenges will be to legally order relationships between the university, faculty members and other contributors to protect the program against charges of copyright infringement.

Distance education programs, therefore, should prepare a copyright audit to determine which materials they can legally incorporate into their programs. All other materials not legally secured should not be used. Furthermore, distance education programs must assess these issues on a class-by-class basis. Written agreements are the best means of ordering the rights between all involved parties. Absent such agreements, the courts will order the relationship in a manner that may or may not be satisfactory to all persons involved.

CREATING DISTANCE EDUCATION COURSES AND PROGRAMS

A distance education program should not be created without first considering three important legal considerations. First, administrators must first determine whether the university need to obtain approval from accrediting agencies or higher-education boards in the states where they plan to offer distance learning programs. Generally, approval is needed unless the university is not awarding academic credit for the classes, or unless it does not have a "physical presence" in the state. Not surprisingly, however, the procedures for obtaining permission to offer a distance learning program varies from state to state.

Second and in addition to complying with state regulations covering distance learning programs, institutions must comply with all intellectual property laws discussed herein, including the all important right to "publicly display" the material.

Finally, to help protect themselves from legal liability, universities should establish policies that address ownership.

CHOOSING AN OWNERSHIP MODEL

In determining exactly how to allocate ownership of materials, universities will likely choose between two general models of ownership. The first model might be termed the "patent model," as this is the model that has traditionally been adopted by research universities for patentable inventions. Ownership is transferred from the inventor/faculty member to the university, which in turn assumes responsibility for licensing and enforcement). The faculty member in return receives a royalty. The second model might be termed the "textbook model. This is the model that has traditionally been adopted for textbooks produced by faculty (the faculty member of the authored book retains the copyright and assumes primary responsibility for licensing and managing the book).

Within these two general models, legal instruments can be tailored to meet almost any set objective the faculty and institution decide upon. However, while an infinite number of copyright licensing agreements are possible in theory, a university is unlikely, as a practical manner, to be willing to negotiate a new agreement with every faculty member for every copyrightable work. Some options to be considered by universities and faculty attempting to draft policies or instruments to allocate copyright ownership might include either:

OPTION ONE: Assumes that faculty members are the authors of the works produced.

- Faculty ownership with exclusive assignment to the university: Under this option, the faculty member surrenders management and control of the work to the university in return for some sort or remuneration. The university would have standing to sue for infringement of the work, unless the assignment specifies that the faculty member be entitled to some royalty. S/he then would also retain standing to sue.
- Faculty ownership with a non-exclusive assignment to the university: Under this option, the faculty member retains control of the work, while the university gains the right to continue using it when the course is taught by others. The institution, however, would not have standing to sue for infringement by others.

OPTION TWO: Assumes that faculty are considered employees of the university under the works-made-for-hire doctrine. The institution therefore is considered the author of the works.

- University ownership with a non-exclusive license to the faculty member: Under this option, the faculty creator of a work would be given the right to use the work in subsequent classes taught elsewhere, but the institution would retain control of the work. Also, the faculty member would not have standing to sue others for infringement.
- Assignment of the rights to the faculty member: Under the option, the faculty member could control and manage licensing of the work. If the assignment specified that the university was entitled to a royalty, it would retain the right to sue others for infringement.

OPTION THREE: Assumes that faculty members are independent contractors.

- Assignment of rights or license to the faculty member: Under this option, the course materials would be designated a specially commissioned work and the university would be expressly designated the author. The faculty creator, however, could be given the exclusive or non-exclusive rights, or a royalty as in Option 2.
- Assignment of rights or license to the university: Under this option, the faculty member is considered an independent contractor and thus, the authorship vest in the faculty member. An assignment rights or a license to use the material, however, could be given to the university as in Option 1.

EXAMPLE POLICY PROVISIONS

Construction of a university-wide intellectual property policy is a sophisticated process. Not surprisingly, therefore, university copyright policies vary a great deal. In addition to copyright ownership, most policies specifically define what faculty-created works are protected (e.g., works produced as a result of "specific," "direct," or "job assignment," or "normal duties.") Some policies also attempt to define the specific works claimed, such as "technical materials, photographs, audio tapes, films," etc. Still others distinguish computer programs from other copyrightable works. Some of the more common policies, for example, include primary ownership resting in either the university or professor. Other policy favor joint copyright ownership between the faculty and university. Still other outcomes include royalty-free licenses for the university, or reimbursement to the university for the use of university resources. Despite all of these potential differences, few university policies will solely favor the university or the faculty. Most will speak to some type of joint ownership. Joint ownership, also referred to as "co-authors" is not, however, always advisable. These types of policies create a tenancies in common. Since either co-owner can license the work, joint decisions by the university and faculty member would be necessary for effective marketing of the work. Such a provision permits the faculty member to market the work independently because the university has no right to license to work to others. Perhaps a more workable alternative would be to give the university a non-exclusive, royalty-free license to use the work. Another alternative which creates even less of a possibility of future friction is reimbursement to the university by the faculty member for the resource used.

FACULTY INTEREST

Some of the more creative measures designed to protect faculty interest are those policies which recognize faculty importance of the control over dissemination of works even if the copyright is claimed by the university. Such a provision would grant the faculty member the power to (1) control use of the work within the university, (2) revise the work, (3) make new works based on the claimed work. No policies, however, would likely grant unilateral control over any aspect of use of the work outside the university, such as how or where the work is marketed or published.

COPYRIGHT ENFORCEMENT

Enforcement of one's copyright is an important consideration in determining how ownership is allocated. Individual faculty members may not have the re-

sources to police infringement of the works that they have created, whereas UNL likely has sufficient resources. At the same time, it may be desirable to ensure that both the institution and the faculty member have standing to sue for infringement of the work (standing to sue can be modulated by the use of exclusive licensing or royalty agreements). Exclusive licenses, for example, confer standing to sue upon the licensee, whereas non-exclusive licenses do not. A royalty agreement may also confer a standing to sue.

AVOIDING LEGAL PROBLEMS

As a general rule, parties should enter into written agreements with producers, professors, students and all other contributors. Each agreement should specifically delineate the ownership of the intellectual property rights in both the programming itself and the materials integrated into the programming. Absent such agreement, ownership questions will likely be decided through litigation.

In addition, before producing or distributing any programming that incorporates the copyrighted works of others, universities should obtain written clearances from copyright owners that allow the entities to perform, display, distribute and reproduce all visual, musical and written material incorporated within the programming, as well as to prepare, perform, display, distribute and reproduce any derivative works from those materials.

INTELLECTUAL PROPERTY AUDITS

Before embarking on an extensive and expensive program designed to create and distribute programs via distance learning mediums, an intellectual property audit should be performed. This involves organizing the primary written and video material one intends to exploit and all pertinent agreements covering rights to these works. Oral understanding should be put in writing and questions regarding ownership and rights to exploit resolved. s new works are created, written agreements should delineate the ownership and use entitlements. All trademarks and service marks to be used should be protected and registered.

CONCLUSION: INTELLECTUAL PROPERTY

The discussion of ownership over intellectual property too often isolates administrators and faculty members, placing them at opposite ends of a continuum while manifesting a competitive relationship between both sides. There is, however, a better alternative. Universities and faculty members should work together with an ongoing mutual reinforcement of shared interest and trust.

Otherwise, a win at all costs attitude will likely impede the future of learning -- distance education.

Currently, the gray areas of copyright law do not yield any legal certainty on copyright ownership. This paper, however, has attempted to define the current methods that may dictate ownership. They are as follows:

- Initially, Section 17 U.S.C. 201(a) vests ownership of copyrights with the author;
- Section 17 U.S.C. 201(b), however, provides that under the works-made-for-hire doctrine, the employer is considered the owner;
- The law is unclear as to whether this doctrine applies in higher education.
- Depending on the language and other requirements, a university policy may potentially define copyright ownership despite the above statutory provisions;
- Similar to a university policy, a written contract can assign or define copyright ownership;
- Finally a contingent agreement can protect a copyright owner by assigning ownership to interested party in case Congress or a court grants ownership rights to the other party.
- Also, a limited license does not grant ownership to the user, but it can grant other rights, such as the right to copy and distribute the work, etc.

In sum, it is unlikely that copyright ownership in higher education will be decided any time soon. For that to happen, Congress would essentially have to modify the Copyright act, or a court would have to interpret the Copyright Act and define ownership over faculty-created works. The other alternative is for universities and faculty member to jointly agree on ownership rights. Otherwise, those outside of higher education will eventually determine ownership.

c. Schedule/Calendars

To consider schedule/calendars, we can look to Kirby (1998) in a discussion of high school calendars:

.....how do the course calendar and school calendar mesh? If there is much variation in the course and school calendar, students will probably miss a number of days of the distance course due to school exam schedules, holidays, and teacher work days. While absence is not always a critical factor in face to face education, it can be crucial in distance education. Since distance education courses frequently have multiple sites participating, course material is not eas-

ily delayed or repeated for sites when they miss sessions. Most distance providers using videobased distance delivery encourage participating schools to tape the missed classes, but scheduling makeup sessions for students can be problematic given the other time demands students encounter in the high school setting. Thus, students returning from a school scheduled vacation may find themselves several days behind their classmates at other locations. Even worse, these students get further behind as they try to make up what was missed in order to catch up with what is going on.

Does this mean administrators should avoid high school distance courses that don't match a school calendar? Not necessarily. If the students enrolled in the course are autonomous and selfdirected, and are willing to assume the responsibility for making up the missed classes themselves, they can probably successfully catch up and succeed. However, if the students are not willing to take on these responsibilities, then the school must structure a makeup plan to assure the students do complete the missed requirements in a timely manner recognizing that the development of such a makeup plan may be difficult.

Thus, institutional schedules and calendars can be merged. It will be up to schools at all levels to develop collaborative agreements and arrangements which negotiate schedules and calendars across boundaries. Individual instructors now do this as they deal with satellite courses from other campuses. This may mean that at the course level, schedules and calendars may be relative easy to resolve.

d. Pre-K to 12: **Been There; Done That in Nebraska** (The following is based on a paper by K. Bartels).

Distance Education is not new in Nebraska. The Department of Continuing Education at the University of Nebraska has operated a fully accredited correspondence high school and has provided courses in a variety of subjects for over 70 years. In addition to providing courses of study for many students in Nebraska, they have an annual enrollment of over 14,000 students worldwide.

Nebraska schools have formed cooperative telecommunication "pods" to deliver one-way and interactive audio and video instruction among members of the pods. The Nebraska Educational Television Network has delivered classroom instruction through its satellite delivery system.

TITLE 92 - Nebraska Department of Education Chapter 10 - Regulations and Procedures for the Accreditation of Schools (commonly known as Rule 10) makes provisions for distance education and correspondence classes. To be an accredited high school in Nebraska, the school must provide access to 400 instructional units for each student each school year. But this rule goes on to say: "Schools provide required instructional units on site or through a combination of local and distance learning programs." (Emphasis mine). It further specifies that "Up to 100 instructional units of the 400 unit instructional program requirements of the high school may be met through the use of courses presented primarily through one or more forms of distance learning technology such as satellite, regional course sharing, or other audio-video distance learning." Further, "up to 30 instructional units of the instructional program requirement of the high school may be met through the use of correspondence courses available through the Independent Study High School, University of Nebraska-Lincoln"

Clearly, the state of Nebraska recognizes the validity of distance education and allows school districts and students to avail themselves of this type of instruction. But should they? If they do, what should be considered before they do so? What problems may arise? What interest does the State have in this area? What are the implications for K-12 education?

CURRENT STATE REGULATIONS OF DISTANCE EDUCATION FOR K-12 INSTITUTIONS

As noted above, schools can provide classes via distance education. But restrictions do apply. "(a) Each course is shown on the high school class schedule, (b) at least one student is enrolled and participating in each course to be counted, and, (c) each student enrolled in a course is assigned to a local certificated teacher who monitors student progress and general appropriateness of the course, or (d) provided the course is approved in advance by the Department." The teacher is present in the classroom while instruction is in progress unless " ...The off-site interactive teacher holds a valid teaching certificate and a paraprofessional is present in the classroom, or ...The off-site interactive teacher holds a Nebraska Teaching Certificate, maintains two-way audio and video communication with the distance learning classroom, and has a direct telephone connection with a supervising adult in the school."

In regard to correspondence courses: "(a) the courses are made available to all students at the school's expense, (b) at least one high school student is enrolled in each course used towards compliance with the instructional program requirement, (c) a correspondence study class is scheduled each day that school is

in session with a certificated teacher present (one teacher may supervise several correspondence courses within a single class period), (d) students are required to attend the scheduled classes, and (e) a statement indicating the name of the course, the number of hours to be completed, and the name of the students enrolled is on file in the school system. The class assigned for the correspondence work must be shown on the high school class schedule."

In each case, restrictions (a) and (b) seem to speak to the validity of the school's system. A K-12 system cannot claim to be offering classes if no one is taking the class. The rest of the restrictions seem to speak to the validity of the learning. Just as the state trusts the professional judgment of a certificated teacher to assure appropriate instructions in a regular classroom, the state trusts the certificated teacher (and his or her supervisors) will use professional judgment regarding distance learning instruction.

It appears that these Nebraska State Regulations refer to distance education at the high school level. We found no reference to regarding distance education at the K-8 levels.

STATE CONCERNS BEYOND ACCREDITATION

The Nebraska Legislature has taken a greater interest in the cost of K-12 education in recent years because of concerns about the fairness of locally assessed property taxes. In addition, the state has recognized that while it has delegated to local governing bodies much of the responsibility of running K-12 education, local school districts do not and can not act in isolation.

The state created Education Service Units (ESU's) to provide a structure for school districts to pool resources and work together more easily. The state increased the amount it contributed to the cost of K-12 education. And the state realized the importance of technology in the schools and its responsibility to facilitate the building of an infrastructure to support the information technology age.

LB 924 was passed during this last legislative session and went into effect as of July 1, 1998. This bill created the Nebraska Information Technology Commission (NITC), a group given the charge to coordinate the development of the technology infrastructure in Nebraska which is paid for with state dollars.

This charge is applicable to all government, education, and community entities. Advising the Commission are three councils: Education, State Agency, and Community. Their job is to identify accurately the technology infrastructure

needs of those in each group they represent and to review all requests for state money that are proposed to fulfill these needs.

Once reviewed, the requests along with recommendations are forwarded to the Nebraska Information Technology Commission which in turn has the proposals reviewed by a Technical Review Panel. The panel reviews the requests only for technical feasibility.

The NITC then recommends funding the proposals or drafts its own funding proposals for legislative consideration to carry out the technology infrastructure requests.

The Education Council has 16 members, eight of whom are from K-12 education and eight of whom represent higher education. This Council has put in place a process and suggested forms for schools and universities to use in submitting proposals for technology infrastructure funding.

The Legislature may have intended that coordinating structure will be helpful to elementary and secondary education in securing needed funding for our technology infrastructure needs and in saving tax dollars by avoiding duplication in infrastructure.

How well this process will work and if it will meet the needs of the Legislature and K-12 educational institutions is not yet known. Some questions do arise. Will this limit the flexibility of local schools? Will the Legislature provide additional dollars for infrastructure? Will this force greater accountability or just more red tape?

CURRENT LOCAL DISTRICT RULES AND REGULATIONS REGARDING DISTANCE EDUCATION

Some school districts require a greater level of commitment and discipline from students taking distance education courses than others do. They have rules such as: "Students must remain within sight of the video camera." "Students must respect the equipment." "Students are responsible to leave the classroom ready for the next class." Are these rules the same as or very similar to regular classroom rules?

Teachers and administrators relate that "two or three violations and they are out of the class." This seems to imply that behavior standards for distance education classes may be more restrictive than in regular classes.

SETTING POLICY: A FUTURES PERSPECTIVE

Academically, school boards and administrators must develop criteria for selection of course components, modules, and resources from the amazing smorgasbord of resources available. Someone must think through the process of evaluating students who are enrolled in courses that are designed and presented by non-local instructors. We must know when and how we will create highly personalized programs for students. How will we ensure our students have the prerequisites necessary to succeed with the specialized offerings possible through distance education? Will our grading policies and expectations of student production mesh with those of online instructors?

Local officials must not only be concerned about the learning of the student but also about reactions from the community. Successful public relations, or communication with local constituents, is always a formidable task. School boards will have to maintain their avenues of community involvement and develop new ones. For example, parents and representatives from district interests typically form advisory committees to assist with such duties as curriculum selections. What forms can and should this type of involvement take in selecting among distance education options? How can local schools assure their patrons that the distance educator is of high quality when the patrons cannot meet him or her?

How will colleges and universities react to transcripts that include distance education courses that may not conform to Carnegie Unit standards? Maybe as institutions of higher learning come to grips with their issues of the "virtual university," certification vs. degrees, etc., they will become more flexible regarding transcripts from high schools.

The fiscal stipulations of distance education will challenge school personnel and communities for the foreseeable future. School boards must be prepared to explain a comprehensive cost-benefit analysis of technology to their communities. While grants and one-time bond elections may often fund the initial cost of distance education technologies, how will the infrastructure be maintained? Local school boards and personnel must be able to assess their local needs for both today and tomorrow. When is the best time to make technological purchases? What exactly should those purchases be? How do we avoid the phenomenon of buying equipment that becomes obsolete before the bill arrives?

How will we provide for the operation and replacement of equipment, the delivery of supplementary materials, and the proctoring of exams? What happens

when the equipment breaks down five minutes before the start of class? We must also have procedures in place that address classroom management issues.

Logistically, there will be problematic issues arising around the coordination of school calendars and school day schedules with distance education course calendars and daily schedules. How flexible can schools be, and how flexible must they be in order to take advantage of the largesse distance education may offer? What will be the effects of radically different or highly individualized scheduling patterns on community life? A school may be able to change its schedule to respond to a local event - getting five schools and the off-site instructor to change their schedules is not as easy.

Student support will be a major area of concern. Who will be the people with whom students will interact daily if a significant portion of their education is delivered technologically? Those who select courses and delivery systems must have a precise understanding of student needs and aptitudes. We must have support services in place to assist students engaged in distance education activities. Students will need support navigating the research possibilities of the Internet.

The role of the local instructor will evolve. Teachers will not often design educational activities, but they will select and merge and personalize them. They will want to develop methods of interaction and coordination with online instructors and content-area specialists from around the world. They must work with counselors and administrators to define the role of the local facilitator who will be the person who makes distance education work right in real time, on site. Schools must be able and ready to provide the training staff will need to adapt to changing roles.

Legal questions will arise with the increasing use of distance education. There will be issues of copyright and fair use to examine and determine. We must be able to anticipate possible conflicts between local policies and those of the providers of course modules and educational resources. The issues of student evaluation and grading must be precisely determined and agreed upon before rather than after distance education activities are contracted. As local personnel roles change, there also will be labor-management topics to discuss. We certainly will be better off if school board members, administrators, teachers, staff, and citizens start the journey towards the technological future of education together now rather than different people trying to catch up at different spots down the road later.

CONCLUSION: Pre-K to 12

When setting policy, schools must begin at the beginning. The *raison d'Ítre* of schools is to educate students. When should a K-12 educational institution engage in any aspect of distance education? The answer is: When the use of distance education can enhance the learning of the student or enhance the efficiency of the institution without diminishing the learning of the student.

It may be that all policies regarding distance education should be judged by how well they meet the criteria of that answer alone. This doesn't mean that decisions will be easy. Questions of enhanced learning and greater efficiency are often difficult to judge - especially in the short term. But the criteria we should use for distance education should not be different than for locally originated education.

These are many of the issues which we must come to grips with if we are to be successful in taking advantage of the promises of distance education. It is important to identify these issues and to understand their current context so that we may more intelligently address them.

People have already started to grapple with these issues. Some of these questions are already being answered in at least some areas of our state. Fortunately, we have a history of successful educational policy decision-making to build upon.

Academically, we have dealt with course selection criteria and evaluation procedures since the establishment of the first school district. We must be able to isolate the essential principles underlying these activities so that they may be applied to policies regarding distance education.

Hopefully, school boards already have well-established avenues of communication with their constituents. They are no strangers to the challenge of telling the public clearly and in a timely fashion about new ideas and new possibilities. Working with local communities in implementing new distance education options is a continuation of the long-standing task of interpreting the value of educational innovations and applying them locally.

We also know what the role of student support services should be: To provide the material, intellectual, and emotional resources students need in order to make the most of the educational opportunities afforded them. It is the particular application of this philosophy to distance education offerings which must be examined and determined.

Probably one of the biggest issues to be debated is the role (or roles) of the local instructor. While opinions may be contentious, we can ensure our success if we can agree to start from this point: Our mutual desire is to design models which will enable us to enhance the learning opportunities of our students.

Fiscal challenges have always been with us and have become a cause celebre in the last decade. Our tasks as policy-makers are: first, to gather accurate and complete information; second, to disseminate this information clearly to our constituents; and third, to work with the public in finding the monies to fund our needs.

The core question is this: How can we provide the best possible education for our students? Our policies must continue to be built around this priority. In this regard, postsecondary institutions must look for ways to cooperate and collaborate. Models for this may be found in Concordia University's linkage with their sister high schools, Chadron States' linkages in western Nebraska Southeast Community College's linkages with the nearby public school system .

In Nebraska we have a tradition of student-focused decision-making. We appreciate the importance of community involvement in setting policy. Our challenge is to maintain these high standards in the face of the rapidly changing and expanding technology which will significantly alter the face of education.

e. Addressing the Rural Sector in Nebraska

Based on the work of Allen, et al. (1998), Irving (1995), McConnaughey (1997), U.S. Office of Technology Assessment (1991), Lacy (1998) summarized key policy areas for technology, distance education and training: academic, fiscal, student support services, technologies, geographic, labor management, and governance. Several items of note:

Significant segments of the population still remain unconnected by telephone and or computer. There are still 'have nots' among low income, minorities, and young, especially in rural areas and central cities. What is the role of postsecondary institutions to provide access to 'have nots?'

Digital divide has increased between '94 and '97 there is even greater disparity in penetration levels among some groups. Blacks and Hispanics now lag even further behind whites in their levels of PC ownership and online access. This has implications for postsecondary education and access and opportunity.

Policy makers need to focus on connecting these populations so that they can communicate by phone or computer. It is these populations that could most use electronic services to find jobs, housing, or other services. Because home connections will take time, it is vital that schools, libraries, and other community access centers provide computer access. Does Cooperative Extension, local school systems, and ESUs have roles to play here?

If rural businesses pool their communication needs, they can benefit from the same kind of efficiencies that large businesses enjoy by using broadband technology. It is the only by pooling public and private demand that advanced communication systems can be economically deployed to rural areas. Can the postsecondary system provide any facilitation to help businesses (and communities) engage in discussions which could take them in moves toward efficiencies?

There are a number of instances where economic development goals and telecommunication policy goals are in conflict. Ways must be found to reconcile these differences in communication technologies are to play a major role in future development programs. However, not all communities are interested in economic development. Development programs must allow communities the choice to adopt them to opt out in accordance to their wishes. US

Revitalizing rural communities through communication technologies requires the cooperation and commitment of:

1. Rural institutions such as schools, libraries, and medical and health providers, and the local and regional development agencies;

2. The communication providers such as the Bell operating companies, independent telephone companies, cable tv, and satellite companies;

3. Catalysts for change. coming for example, from colleges or universities serving rural areas, local educational or community leaders Federal, State, or local government, and private entrepreneurs US

From a postsecondary policy perspective, Nebraska institutions will have to work through several rural issues to develop effective distance education policy processes. This is especially true if "access" and "affordability" are to be key elements of a large institutional policy.

f. Cost Concerns

At this time, we have several models for understanding costs in a distance setting. We are continuing our research in this area.

VI. A Practical Policy Framework: Old Wine in New Bottles

The November 1995 Final Report from the Nebraska Information Technology Commission, provided a practical policy framework for decision makers to think about telecommunications and information technology. Those questions appear to be relevant to today's distance education policy environment. The policy framework is a tool to think strategically about distance education. (Armstrong, 1995)

1. How does the distance education activity impact policy concerning LIST. Will the proposed activities enhance or discourage linkages in the pre-K-12 and postsecondary educational institutions, and to and within telecommunication information technology or related businesses. ?

2. Does the proposed distance education activity direct other initiatives toward promotion of distance education or the recruitment and training of knowledge workers?

3. Does the proposed distance education activity encourage or discourage the expansion of access for all Nebraskans to community, sate, national and global educational networks and services?

4. How effectively does the proposed distance education activity promote efficiency in educational operations.

5. Will the proposed distance education activity provide educational opportunities for Nebraskans?

6. Does the proposed distance education activity encourage or discourage the coordinated deployment of educational infrastructure throughout Nebraska?

7. Does the proposed distance education activity strengthen the education program and curriculum or the use of distance education in Nebraska educational institutions?

8. Does the proposed distance education activity facilitate the expanded use of information and interactive technology by Nebraska's educational system?

9. Does the proposed distance education activity exhibit an effort to coordinate and form partnerships with others having similar interests?

These questions should help policy makers refine discussions as the nine questions reinforce the major distance education issues noted throughout this paper.

VII. Moving to 2000

In this analysis and discussion of Nebraska postsecondary distance education policy, key lessons emerge:

- collaboration between Nebraska postsecondary institutions sets up win-win situations, especially when based on the new technologies of distance education.

- to build collaborative relationships, distance education policies must be developed.

This is because of certain realities of the distance education environment. Policymakers will have to ask: "is anything that the providers of distance educators control sufficiently predictive of distance education success, in terms of:

- filled classes,
- demand for classes, and
- students who are pleased with the courses/programs, and
- students who have new skills, competencies, and/or knowledge?

Obviously, providers of distance education cannot control the elements which might guarantee success. But we think a systems approach through the policy analysis framework discussed here and collaborative relationships are beginning elements in a successful distance education effort.

At UNL, we can look for models of successful distance education programs, whether or not they have written distance education policy. UNL models can be found in:

1. Education Administration

2. College of Human Resources and Family Sciences
3. College of Business Administration
4. Cooperative Extension
5. Division of Continuing Studies

We can build our distance education programs on our strengths. One strength is the CCPE (Coordinating Commission for Postsecondary Education). The CCPE can be a facilitating body to help the citizens and the institution optimize themselves in terms of distance education programming.

In the end, postsecondary institutions will have to develop:

1. policies for courses
2. policies for degrees
3. policies for intellectual property
4. policies for the fiscal issues
5. policies for faculty and students

These policies can be developed in three ways:

1. distance education policy fights for turf in which supporters embrace a growing power base and develop their own policies within units.
2. distance education policy fits into existing structures and shapes itself to adhere to current practices.
3. distance education policy develops and becomes independent of general university policies, a *de facto* secession.

Most of this paper has argued for the second development path: distance education policy fitting into existing structures and shaping itself to adhere to current practices. This allows the "win-win" strategies to emerge and encourages cooperation and collaboration.

In a State with limited resources and a high quality education system, this approach should prove successful. It will take time and energy, and staying power; but we believe it is the path for postsecondary institutions to achieve the vision of "communities of learning" in Nebraska.

References:

Available upon request

References

Downes, S. "The Future of Online Learning." *Journal of Distance Learning Administration*, Volume I, Number 3, Fall 1998 State University of West Georgia, Distance Education Center (http://www.westga.edu/~distance)

Gellman-Danley, B. and Fetzner, M. "Asking the Really Tough Questions: Policy Issues for Distance Learning." *Journal of Distance Learning Administration*, Volume I, Number 1, Spring 1998.

Kirby, E. "Administrative Issues for High School Distance Education." *Journal of Distance Learning Administration*, Volume I, Number 2, Summer 1998.

Distance Learning: The Next Generation. Satellite Educational Resources Consortium (SERC). Columbia, SC (http://www.serc.org/spress.html)

Rule 10: Regulations and Procedures for the Accreditation of Schools. Nebraska Department of Education (http://nde4.nde.state.ne.us/legal/rule10.html), October 26, 1996 (Revised)

Aden, N. 1998. Student Services for Distance Learners. Unpublished paper. Univ. Nebraska- Lincoln. May 12, 1998.

Allen, J.C., Byers, A., Hoy, C., & Jarecki, E.J. 1998. Teleliteracy levels and needs in Nebraska by sector. The center for rural community revitalization and development, Lincoln, NE:Insti. Agric.Natural Res.

Anderson, J. E. (ed). 1976. *Cases in Public Policy-Making*. New York: Holt Rinehart and Winston.

Arms, W.Y. 1998. *Implementing Policies for Access Management*. D-Lib Mag. (Feb).

Armstrong, R. (ed). 1994. Executive Summary, Final Report. Lincoln, NE: Nebraska Information Technology Commission.

Berge, Z.L. 1998. "Barriers to Online Teaching in post-Secondary institutions: Can Policy Changes Fix It?" *J. Distance Learning Admin*. 1:2. (http://www.westga.edu/~distance/Berge12.html

Board of Regents of the University of Nebraska.. 1998. University of Nebraska Policies

RP2.1.6 Relationship of Teaching, Research, and Service. Lincoln, NE.

Collins, J. and M. Hopkins. 1997. What Comes Next? Inc. 19 (14): 40-50.

Crews. K.D. 1993. *Copyright, Fair Use, and the Challenge for Universities: Promoting the Progress of Higher Education.* Chicago:Univ. Chicago Press.

Diotalevi, R. N. 1998. "Copyright Cyberspace: Unweaving a Tangled Web." *J. Distance Learning Admin.* 1:2. (http://www.westga.edu/~distance/Diotalevi12.html)

Ferencz, S.K. and C.W. goldsmith. 1998. "Privacy Issues in a Virtual Learning Environment." *CAUSE/EFFECT.* 21(1): 5-11. (http://www.cause.org/information-resources/ir-library/html/cem9812.html)

Gellman-Danley, B. 1995. A Workbook on Distance Learning Program Development. Boulder, CO: Western Coop. Educa. Telecom.

Gellman-Danley, B. 1995. A Workbook on Policy Development for Distance Learning. Boulder, CO: Western Cooperative for Educational Telecommunications.

Gellman-Danley, B. and M.J. Fetzner. 1998. "Asking the Really tough questions; Policy Issues for Distance Learning." *J. Distance Learning Admin.* 1:1.

Green, T. F. 1994. "Policy Questions: A Conceptual Study." *Education Policy Analysis Archives*. 2:7.

Institute for Distance Education. (nd). Selected USM (University System of Maryland) Policies.

Irving, L. 1995. *Falling through the net: A survey of the "have nots" in rural and urban America.*

(http://www.ntia.doc.gov/ntiahome/fallingthru.html)

Kirby, E. 1998. "Administrative Issue for High School Distance Education." *J. Distance Learning Admin.* 1:2.

McConnaughey, J.W. 1997. *Falling through the net II: New data on the digital divide. A survey of information "haves" and have nots" in 1997.*

(http://www.ntia.doc.gov/ntiahome/net2/falling.html)

Moore, M. and G. Keasley. 1996. Distance Education: A Systems View.

Mulford, C.L. and D.L. Rogers. 1982. Definitions and models. In D.L. Rogers, D.A. Whetten and Associates (Eds.). *Interorganizational Coordination: Theory, Research, and Implementation.* Ames, IA: Iowa State University press. 9-31.

Rahm, D. and B.J. Reed. 1998. *Tangled Webs in Public Administration: Organizational Issues in Distance Learning.* http://brain.hbg.psu.edu/Faculty/jxr11/rahm.html

Rayport, J.F. and J.J. Sviokla. 1995. "Exploiting the Virtual Value Chain." *Harvard Bus. R.* Nov.-Dec. 75-85.

Ringle, M. and D. Updegrove. 1997. "Is Strategic Planning for Technology an oxymoron?" Presentation to the 1997 Annual Meeting of CAUSE. Paper was presented at the 1997 CAUSE annual conference. Part of the conference proceedings, "The Information Profession and the Information Professional," published online by CAUSE. http://www.cause.org/information-r...-library/html/cnc9758/cnc9758.html

Rockwell, S. K., D.R. Hay, and J.S. Buck. 1991. Organization and Implementation Assessment of the FY90-94 Water Quality Demonstration Projects. Lincoln, NE: University of Nebraska, Cooperative Extension.

Steward, D. L. 1995. Televised Postsecondary Distance Education: Factors Influencing Policy Creation and the Effect of New Technologies and Multi-State Educational Consortia on State Policy. Unpublished doctoral dissertation. Graduate School of Education and Human Development. George Washington University.

United States. Congress. Office of Technology Assessment. 1991. Rural America at the crossroads: Networking for the future: Summary. Washington, D.C.: Congress of the U.S., Office of Technology Assessment.

Vinces, D. 1997. Larger Scale Distance Learning Initiatives. Presentation to the 1997 Annual Meeting of CAUSE. Paper was presented at the 1997 CAUSE annual conference. Part of the conference proceedings, "The Information Profession and the Information Professional," published online by CAUSE. http://www.cause.org/information-r...-library/html/cnc9733/cnc9733.html

Wiley, D. 1997. Overcoming Electronic Course Delivery's Greatest Obstacle: Specific Policy Recommendations for Institutions of Higher Learning. Presentation to the 1997 Annual Meeting of CAUSE. Paper was presented at the 1997 CAUSE annual conference. Part of the conference proceedings, "The Information Profession and the Information Professional," published online by CAUSE. http://www.cause.org/information-r...-library/html/cnc9762/cnc9762.html