Testimony of Dr. Lynne Schrum
On Behalf of the International Society for Technology in Education
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It is my pleasure to have the opportunity to testify before you today. Having studied and taught about and through distance education for the last thirteen years, and representing my organization, the International Society for Technology in Education (ISTE) plus having gathered information from consumers and providers of distance learning, I will try to bring multiple perspectives to you today.

It is important to remember that the decisions made for distance learning classes have far-reaching effects on all campuses and for all levels of learning. A recent study (The Campus Computing Project, 1998) found that over 44% of traditional college classes use email, up from only 25% in 1996. One third of all classes use Internet resources as part of the syllabus, and almost one fourth of the courses are using WWW pages for materials and resources for their classes. The blending together of traditional and non-traditional learning opportunities is perhaps one of the most exciting aspects of the rapid development of information technology.

The nature of distance education has changed dramatically over the last quarter century, and even more rapidly in the past ten years. Although the definition is still debated, most would agree that distance learning includes the following components: separation of teacher and learner, activities include interaction, mediation by technology is available, and sponsorship by an institution or organization. From Penn State's perspective, "Distance education is not simply the addition of technology to instruction; instead it uses technology to make possible new approaches to the teaching/learning process." In the United States, many forms of distance learning are still popular (satellite, two-way videoconferencing, correspondence, etc.), and many of these have incorporated electronic communication to ameliorate the lack of perceived interaction. Additionally, we have seen an enormous growth in the number and types of those courses that are primarily or entirely delivered via digital networks. What differentiates them from normal electronic communication is the organized structure, stable group of participants, sponsorship by an institution, and the structure of an overarching framework and explicit learning outcomes.

Characterizing any set of diverse courses is always difficult; however, some common elements do exist. Many of these digital courses use a variety of technological media: electronic mail, computer bulletin boards,

synchronous chats, groupware (a relatively new class of software now used for classes), and video teleconferencing through the Internet. Resources are typically posted for student access, and these may include text, video, audio, and graphical files. These courses vary widely in terms of their interactivity in three areas. Most have high interaction between the learner and the content, fairly high interaction between the learner and the instructor, and less well developed interaction among the students.

Let me offer some examples of the ways in which distance learning is being used at the post-secondary and K-12 levels.

... Florida Virtual High School - This organization assists all school districts in Florida. It teaches traditional high school subjects, and one example will demonstrate its power. A car accident left a student in a wheel chair, and he was not able to attend an advanced science class because no way existed to get him to the second floor of the building. So, he took that course through the Florida Virtual High School, using his local school's library media center, and was able to complete his high school program on time.
... WholeARTs Internet Music Conservatory, for post-secondary and K-12, which
includes interactive music school lessons using electronic communication and information technologies.
... The AP high school offers learners throughout the country, who may not have access to advanced placement classes in their local schools, the ability to learn subjects, and level the playing field for all those who are planning to attend college. Many of these subjects include significant video and audio components (e.g., US history, literature, and the sciences).
... Cyberschool - Eugene, Oregon based electronic high school that provides courses to students around the country. These courses vary in credits and timing, but also offer classes that may not be available locally, for example, All the World's a Stage, a Shakespeare One class.
... Subjects in which one entity offers a unique set of programmatic or certification coursework. These include medical technology, bed and breakfast ownership, and veterinarian assistant programs, to name only three. These are subjects that bring difficulties in any circumstance (combining procedural, content, and practical knowledge) but in the digital distance environment, they present even greater challenges. Combining multiple media, electronic resources, and local supervisors has proven to be a way to overcome the difficulties, resulting in students who are able to pursue career goals. As a specialized career path, it is often difficult to obtain the correct training, but online courses have provided the opportunity to gain certification.

Course materials are typically made available to registered participants only. The technology now allows us easy ways to restrict those that see materials, are able to download, or post new information. Almost all programs have strong warnings about ethical uses of electronic communications, in the form of acceptable use policies. Some also have notices such as this found on the web site of the Iowa Digital Education Association:
All trademarks, Insignia, curriculum, and references to any and all organizations associated with this website, are owned and copyrighted by those organizations. Duplication, or any other use of said items is strictly prohibited without the express consent of the owner.

Accreditation of electronic courses has been a challenge, because some accreditation bodies will allow institutions with an accredited course to move it to a digital form, with no scrutiny, and many institutions have the same policy - faculty can move a course online with no evaluation (formative or summative) at all. Many accreditation organizations do insist on review of new degree programs, including those online, but there is little agreement or adherence to a standard or model of what is "good."

There is little unanimous agreement to be found by those who teach or administer these classes. Some online educators insist on large amounts of synchronous interaction among the students and between the students and the instructor; others believe that synchronous interaction is not worthwhile, and eliminates the advantage of "any time, any place" learning. The size of learners in classes varies widely, too. While some may think it is an easy job to monitor and teach large online classes, most who have done it will assure anyone that they expend two to three times the amount of time on an online course as on a traditional one, and that the size of the class should be under 20 individuals.
Recipients are very difficult to classify, for they are all ages, levels of education, and geographic locations. When I taught an online professional development class for educators, I had urban, rural, experienced teachers, and novices. I had some who had Ph.D. but who wanted the experience of the course, and others who wanted the credit to earn a salary increase. These days students in high school will take courses that they are unable to get at their school, single parents earn GEDs without finding a babysitter, or earn advanced degrees while maintaining current jobs and family responsibilities. One case study might describe children too ill to attend middle school, and another can tell about busy business executives who earn an MBA in a customized program - supported by their employer, the university, and their families. Interestingly, the mix of participants, courses, levels, and goals gives strength to the potential of digital courses.

The content used is equally difficult to classify. Many new courses are developed, and clearly, many of us have encouraged anyone transforming a course for online delivery to redesign, reconceptualize, and reevaluate the entire course. Some traditional material is placed online (lecture notes, syllabi, resources) and often new ways of demonstration or interaction are built on multimedia resources. For example,
... An introductory plant biology course used extensive photographs and diagrams to replace slides found in a traditional classroom.
... Astronomy classes have used extensive video and graphic resources to assist students.
... Math and science courses are using satellite footage, video clips, audio
files, and other small units of material that enhances the value of the course.
... Education courses are using video of expert teachers to demonstrate pedagogical techniques, and then students can ask questions directly to those involved about what they saw.

Without these materials students would surely be getting a second class education, or the equivalent to a digital talking head of lecture notes. The technologies employed are changing every day! Streaming video and audio, once difficult, are becoming commonplace. They were not developed for distance learning, and one example demonstrates that point. Groupware, a class of software, was originally created for business applications, to allow multiple participants to sit in one room, each with a computer, and to vote, brainstorm, or discuss an issue. Once those packages were available through the WWW, the potential for distance learning became apparent, and the growth and evolution of these packages has surprised everyone. This software allows the control so that only registered students can enter a "virtual" classroom and view or download materials. There are ways to ensure that those materials disappear or expire in a certain time period.

Over the next decade, we can expect that the extraordinary growth in distance learning will encourage further technological innovation to enhance the quality of the delivery and protect the content of courses delivered via digital networks. I can't promise that every concern raised about the use of copyrighted material will disappear as new applications and technologies come to market, but I can assure you that the institutions delivering distance learning have the strongest incentive to protect content and that is copyright ownership. This is an important point. There are not two distinct interests at play here, the copyright owners on one side seeking to retain economic value of their creative works and the educators on the other seeking to use those works in digital distance learning. Those of us who create distance learning course and the institutions which support are also copyright holders, and much of the course packages that appear on line are copyrighted by teachers, professors and educational institutions. We stand to lose as much as any other creator of content if the material we make available to students is improperly reproduced and redistributed by others.

We understand that digital delivery of distance learning may increase that risk somewhat, but that concern is more than outweighed by the enormous societal benefit that use of these technologies in teaching and learning can bring. We can and must take all reasonable steps that are economically reasonable and technologically feasible to limit those risks. And we should all work together to share knowledge and make new protective technologies ubiquitous and affordable for educational institutions as they are developed. But we can not afford to stuff the Genie back into the lamp. Distance learning over computer networks is flourishing and to keep it robust and growing, national policies must be put in place to encourage it, not to impede its growth.

In closing, I urge you to develop recommendations regarding the use of copyrighted material in distance learning that are not only consistent with the practice as we know it, but flexible enough to accommodate the full vision as it unfolds over the next few decades. Each new technology brings challenges and opportunities. The 1976 amendment to the Copyright Act made Distance Learning for the Twentieth Century a reality. But we have gone as far as we can with a law made for old technologies. It is time to write a distance learning exception to the Copyright laws for the Twenty First Century.

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