

Volume 2 Number 6 2005



# DISTANCE LEARNING

## ...A Magazine for Leaders

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*Distance Learning* is for leaders, practitioners, and decision makers in the fields of distance learning, e-learning, telecommunications, and related areas. It is a professional magazine with applicable information for those involved with providing instruction of all kinds of learners, of all ages, using telecommunications technologies of all types. Stories are written by practitioners for practitioners with the intent of providing usable information and ideas. Articles are accepted from authors with interesting and important information about the effective practice of distance teaching and learning. No page costs are charged authors, nor are stipends paid. Two copies of the issue with the author's article will be provided. Reprints will also be available.

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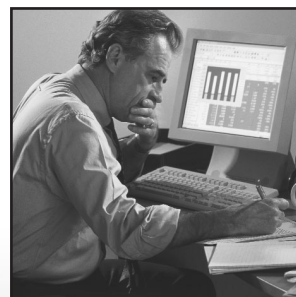
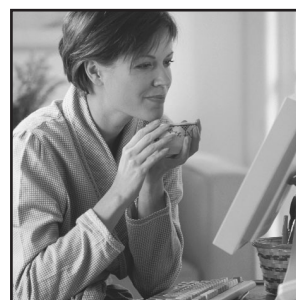
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# Introduction to the Issue

**Les Moller**  
Guest Editor

**T**he growth of distance education programs has been nothing less than astounding. In just a few years, the educational offerings, delivered primarily through the Internet, has exploded. I wonder though, if soon the Internet craze in education will implode like we all witnessed with e-businesses a few years back.

At some point, perhaps fueled by competition, an oversubscribed market, a new technological advance, or student dissatisfaction, the distance education landscape will change dramatically. I think, as we have seen in other environments, that quality lasts. Good programs that provide a sound return in terms of student perception of learning will continue and even thrive.

I wish I knew what makes the perfect distance education program or course. I do know one big factor is interaction. Interaction is what makes learning more than absorbing words on a screen. Interaction between students and teachers is the main element in pushing students to think, evaluate, adjust, and

expand their base of knowledge. Interactions among students give life to the process, provide membership into a community, and help create an identity and norms necessary for human participation.

In this special issue of *Distance Learning*, we are fortunate to have some great insights into creating and sustaining interaction. In "Improving Online Courses: What is Interaction and Why Use It?" Wilhelmina C. Savenye describes the types of interaction, explains why they are so important, and how to increase interaction in your courses.

From the general to the more specific, Jose A. Saldivar presents a creative strategy for obtaining additional interactions. In "Chat Transcripts: Once the Chat is Over, is it Really Over?" he encourages a reflective learning design using a course's existing chat interactions.

In "The Evolution of Distance Education," by Monica C. Tracey and Rita C. Richey, we see how the concept distance education has evolved over time, concluding with an identification of emerging conceptual orientations in distance education thinking, including an introduction to interaction.

In "Getting Connected: IP-based Videoconferencing in K-12 Schools," by Deyu Hu, Barbara B. Lockee, and John Burton, we see how emerging technologies can be incorporated into distance education and

increase the types, opportunities, and possibilities for interaction.

Interaction is indeed a necessary part of distance education. But the quality of the instruction and interaction needs to be considered as well. While we all may become somewhat enamored with the technological possibilities, it is, in the final analysis, education first and foremost. In "Thriving, Not Merely Surviving, With Technology: Some Guidelines for Successful Distance Learning," Glenn E. Snelbecker, Susan M. Miller, and Robert Zheng present two concepts that underlie *why* and *how* instruction is designed, and designate several aspects that must be addressed for designing successful distance education.

Enjoy the issue.

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# Thriving, Not Merely Surviving, With Technology

## Some Guidelines for Successful Distance Learning

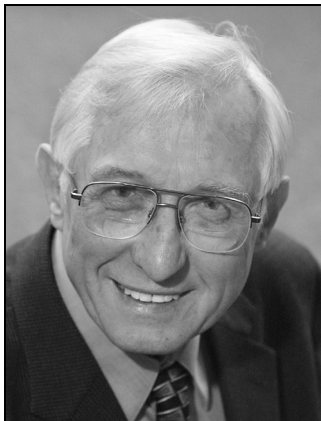
**Glenn E. Snelbecker, Susan M. Miller, and Robert Zheng**

It is acknowledged that there are widely ranging views about whether distance education is similar to other forms of education. This article identifies foundational concepts and guidelines that, the authors contend, are needed for successful distance education as well as for other forms of technology-rich education and conventional approaches. This article describes why *functional relevance* and *engaged learning* are foundational concepts, but also that each particular learning context requires that other aspects need to be addressed.

### **WHY SHOULD WE DESIGN INSTRUCTION? PURPOSES AND PERSPECTIVE**

People vary in the extent to which they view distance education as part of a wide array of educational opportunities

versus as a distinct and unique approach to education that is so different that it needs to be considered as a separate entity with its own



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principles and guidelines. The same can be said about e-learning: Some suggest that principles previously found to be useful in classrooms can also be applied to e-learning, whereas other people seem to feel that contemporary technology resources have such radical implications for instruction that wholly new principles and guidelines must be devised for e-learning (Chadwick, 2002; Foshay & Bergeron, 2002). But, on professional listservs as well as in the professional literature, there seems to be some gradual trend toward focusing more on learning and less on details about the particular technology-support or context in which learning occurs.

The authors acknowledge that distance education does have some unique aspects; but we also contend that there are principles and guidelines from more traditional forms of education that can be applied or modified for use in distance education and other forms of technology-supported learning. This view is particularly pertinent considering the emergent preferences for blended learning, whereby instruction involves various combinations such as face-to-face and distance education. Also of note here is the increasingly wide range of contexts in which distance learning occurs; these include so-called training contexts (e.g., in business, military, government, technical areas) and education contexts (e.g., K-12 schools, higher education, continuing education). The terms *instruction* and *learning* will be used to refer to both training and education contexts. This article identifies two foundational concepts that underlie why and how instruction is designed, and designates several aspects that we contend must be addressed for designing successful distance education. It is recognized that any suggestions from this article may have to be modified due to characteristics, constraints and/or

kinds of resources that actually exist in any given practical situation. However, suggestions are offered in the form of guidelines that can facilitate successful distance learning.

When planning instruction, we typically recognize the need to consider expert opinion, academic standards or performance standards, examples of instruction that have been provided in the past, technology and other resources available to deliver or support instruction, and budgetary limitations. With all of those details and other pressing matters, it's easy to give little more than token attention to the *expectations and perceptions of* (potential or actual) *learners*. Moreover, especially when computers, the Internet and other technology resources are likely to be used, there is a tendency to focus too much on the nature of those resources and to overlook questions about whether such resources are necessary or desirable for the particular planned learning. Two foundational concepts—functional relevance and engaged learning—can help us take a different perspective about why and how we can better design instruction.

## FUNCTIONAL RELEVANCE

Functional relevance basically focuses on the extent to which intended learners actually perceive instruction as being relevant for, and fit with, the way(s) that they function in their work, studies, personal lives, and so forth (Snelbecker, 1984, 1989, 1993; Snelbecker, Miller, & Zheng, 2004). Development of this concept was influenced by Rogers' (1969) concept of personally relevant learning and by Heider's *common sense* psychology observations (Heider, 1958; Snelbecker, 1988). Rogers proposed that students are more likely to learn if or when they perceive intended learning as being relevant for them personally, as distinct from what

someone else (instructors, parents, work supervisors, etc.) may think that they should be learning. It is not enough that some "authority" believes that such learning will be relevant for them "now" or at some point in their lives. Both Rogers and Heider contended that each person acts more in accordance with his or her own present perceptions about situations, and less in automatic compliance with what instructors say that the learners should feel or perceive. Thus it is essential not only that instruction be designed so that it is relevant for how learners function but also that intended learners recognize how and why it is important for them. Making instruction functionally relevant requires that we use language, ideas, and examples with which intended learners are familiar; clarify and elaborate on what is being learned, in both regarding specific details and broader perspectives; provide guidelines to support their initial exploration of new ideas or skills; gradually help them to become more independent of such support; and help them to become self-directed learners who take prudent cognitive risks in using their new ideas and skills (Feldman, Snelbecker, & Mason, 2004).

This is a design perspective that is not limited to education and training. It is noteworthy that parallel ideas have recently been emerging among companies that design such diverse things as Web sites and department stores. Two companies—Electronic Ink and IDEO—in particular have been identified as leaders because of the extent to which they take into account their customers and other end-users throughout the design process. This statement is on Electronic Ink's Web site:

Usability is a measure of how well a tool or device meets the needs of the person using it. Usability

guides every decision made at Electronic Ink. The user plays an essential role throughout our process. They help define and refine the technology, based upon their needs and tasks. They help shape the software they will eventually use.... [This] increases productivity and accelerates user acceptance, while decreasing training time. (www.electronincink.com)

IDEO was featured as the cover story of the May 17, 2004 issue of *Business Week* (Nussbaum, 2004), with this notation on the cover: "A tiny firm called IDEO redefined good design *by creating experiences, not just products* [italics added]. Now it's changing the way companies innovate." Both of these design companies make extensive use of focus groups and periodic tryouts and discussions with users, along with a full array of experts also typically needed in other design companies. That can be expensive. But the first author of this article also has worked with a significantly lower budget to use these same ideas—having intended learners involved in defining and describing intended outcomes, instructions, and support needed during their learning process (Snelbecker et al., 2004).

## ENGAGED LEARNING

We advocate using the term "engaged learning" as a foundational concept and influence on our perspective for designing instruction. Engaged learning is a term that reminds us that: (a) real learning occurs during only part of the total time that people are supposedly involved in or with instruction, and (b) real learning can be increased by maximizing the time that those people are engaged productively on-task to achieve the particular educational/training goals, standards or competencies.

Three other terms customarily have been used for several years in

classroom studies (and interventions) concerning relationships between amount of learning time as a potential influence on (or, determinant of) one's academic achievement level or extent. Those three terms are, respectively, allocated time (the total time scheduled for a particular subject or class—including start up and closing activities and administrative matters), time on task (time when students are actively engaged in studying the particular subject matter), and academic learning time (amount of time when students are actually learning skills, knowledge, critical thinking). Studies typically show that allocated time is not generally related to academic achievement, that time on task has some modest relationship with achievement, but that academic learning time typically is found to have the highest relationship with academic achievement. Thus, it is contended generally that the more time students are engaged in effective learning, the higher their academic achievement is likely to be. These ideas are sufficiently accepted that they are included in some introductory educational psychology textbooks (e.g., Woolfolk, 2004).

For various reasons, the concept of academic learning time has not typically been used with regard to distance education or to other forms of technology-supported learning. That may be due to the fact that much (most?) of the academic learning time literature has been rooted in the human interactions and engagement that are more commonly associated with face-to-face learning. The term "interactivity" has sometimes been used in the technology-supported learning literature to refer to getting students engaged in learning. However, interactivity has been used to refer to a variety of transactions, not all of which are related to improving learning engagement.

One criticism that some educators have emphasized about distance learning is that there may be reduced constructive learning-relevant interactions between instructors and students, and that this could reduce academic achievement (Merisotis & Phipps, 1999). Advocates of technology-supported or technology-based distance learning sometimes have rebutted that view by contending that the technology resources might afford greater, not lesser, opportunities for student interactions (Debbagh & Bannan-Ritland, 2005). Another term, interactivity, which at once somewhat overlaps in meaning with academic learning time, but that also has different connotations associated with it, has been used particularly in conjunction with multimedia systems and various other forms of instructional technology resources. For example, Saettler (2004) noted: "One of the primary applications of interactive video involves an instructional situation whereby a learner is given control so that he may review the material or gain access to remedial instruction" (p. 464). Fisher (2000), in one of a series of chapters in *The 2000/2001 ASTD Distance Learning Handbook* (Mantyla, 2000), illustrated the connection between interactivity and engagement with this comment: "Exercises include all interactions that are used to engage the student in the learning process" (p. 68). Gayeski (2005) described changes that became possible or necessary as new technology resources became more sophisticated and afforded new versions of interactivity. She and her colleague, Williams, developed a taxonomy: "Levels of interactivity and interactive media" (p. 95).

Without detracting one bit from the value of that system or from the contributions of the other pioneers and contemporary interactivity experts, sometimes there seems to



be more of an emphasis on the learner's control of the multimedia or other systems than there is with the extent to which the learner is getting "deep understandings" rather than only surface familiarity with the subject matter to be learned. *Interactivity* sometimes has been used to characterize instances of student engagement in classroom contexts but seems to be more frequently used with regard to distance education and various forms of technology-enhanced learning. One problem is that the term, "interactivity," has been defined and described in too many different ways to provide consistent results. For example, depending on the authors and context, interactivity can refer to any one or combination of the following: interactions between student and instructor; interactions among students; human-computer interaction; students' levels of control over sequence of instruction; task selection; novice to expert levels of complexity or difficulty; depth of critical thinking versus only general familiarity with topic; kind of feedback; time of feedback (such as delay versus immediacy); provision of additional information or help; individual versus group participation; instructional versus evaluative focus, and so forth.

As a result of these various complications and possible confusion about terminology, the present authors propose using "engaged learning" as the term referring to maximizing students' engagement in productive and in-depth learning. Stated another way, instead of having technology "drive" curriculum and instruction, curriculum and instruction should "drive" selections of technology resources and distance learning methodologies (Clark, 1994). Thus, both functional relevance and engaged learning put the spotlight on the learner and learning outcomes.

## EXTENDING THESE FOUNDATIONAL CONCEPTS

The foundational concepts of functional relevance and engaged learning are necessary but not sufficient for designing distance learning. In addition to those ideas, designers and instructors must consider how to adapt instruction to fit with the characteristics of a particular learning situation. The current trend is toward making technology transparent to the e-learner or distance learner. This is a departure from a focus on technology and provides the opportunity for designers and instructors to re-focus on learning and the design of instruction.

Elsewhere the second author and a colleague (Miller & Miller, 2000) have proposed five dimensions that influence the design of Web-based instruction: (a) theoretical orientation, (b) instructional goals, (c) nature of the content, (d) learner characteristics, and (e) technology capabilities. We'll offer some suggestions about how these five dimensions are applicable to distance education.

*Theoretical orientation* is viewed by some as the core of the instructional process because it influences how learning is conceptualized and, for the case of distance education, how technology is used to facilitate learning. One relevant theoretical orientation is typically represented as a continuum: At one end, learning is viewed as the transmission of knowledge from expert to learner while, at the other end of the continuum, learning is viewed as the construction of knowledge. Of course, the beliefs of any given designer or instructor may fall somewhere along this continuum, and may change over time or with different situations. With a view that learning involves transmission of knowledge, the distance education designer attempts to identify

prescriptive strategies, techniques, and technologies that facilitate processing and acquisition of information. At the other end of the continuum, with an emphasis on learners' construction of knowledge, designers would select strategies, techniques, and technologies that support sharing of diverse perspectives, collaboration among learners, and consensus building. The selection and use of technology for distance learning depends to some degree on the designer's or instructor's beliefs about learning and teaching. A view of instruction that involves expert-to-novice transmission of information requires the use of technology as a presentation and delivery tool. When instruction involves the facilitation of collaboration and sharing of multiple perspectives, technology is used predominately as a communication tool or as a tool to represent shared knowledge.

*Learning goals* relate to theoretical orientations at a conceptual level. If learning is transmission of knowledge, then the goal of learning is to acquire new knowledge. If learning is construction of knowledge, then the goal is some yet-to-be defined understanding. However, at a practical level for K-12 educators, learning goals are content-specific, are established by state standards, and guided by professional recommendations. Challenges that face designers or instructors include reconciling their theoretically based goals with externally established learning goals as well as with goals that arise from the nature of the content.

In fact, not only does content influence goals, the nature of content influences the appropriateness of using some particular theoretical approach. Content that is highly structured, and that includes prerequisite concepts or skills, and specific learning objectives might require more prescriptive strate-

gies. Material that is more ill defined or experiential may require constructivist-learning principles.

*Learner characteristics* present some interesting questions regarding effective distance learning designs. In addition, there is some controversy and misunderstanding about which characteristics are important. Certain cognitive styles such as field preference have a wealth of empirical evidence involving traditional learning environments; recent research indicates that this style is important for some distance learning situations. Spatial ability is also emerging as a characteristic that affects learners' successful use of hypermedia environments. Motivation and prior knowledge also continue to be stalwart characteristics that affect learners' success in distance learning environments. Some constructs—such as learning style—that typically have been advocated more on the basis of people's interest than by research findings, apparently continue to find support for their use in distance learning.

The extent to which *technology capabilities* are important influences on learning has had mixed reactions. Excited by the idea of interactivity and given the technological tools to do so, designers have increased students' control over various aspects of instructional elements including sequencing, tasks, and feedback. Unfortunately, not all students benefit. A substantial amount of research in distance education, especially involving hypermedia environments, has indicated there may be ways in which learner control can enhance learning, but that *unrestricted* learner control can lead to learners becoming "lost in hyperspace," getting distracted, and failing to make meaningful connections among presented ideas (Park & Hannafin, 1993; Weller, Repman, Lan, & Rooze, 1995; Wilson & Jonassen, 1989).

Each distance learning situation presents its own challenges. We hope that the concepts of functional relevance and engaged learning, along with these above five guidelines, will help readers to focus on intended learning and to maximize the opportunities that students have to be productively engaged in those learning processes.

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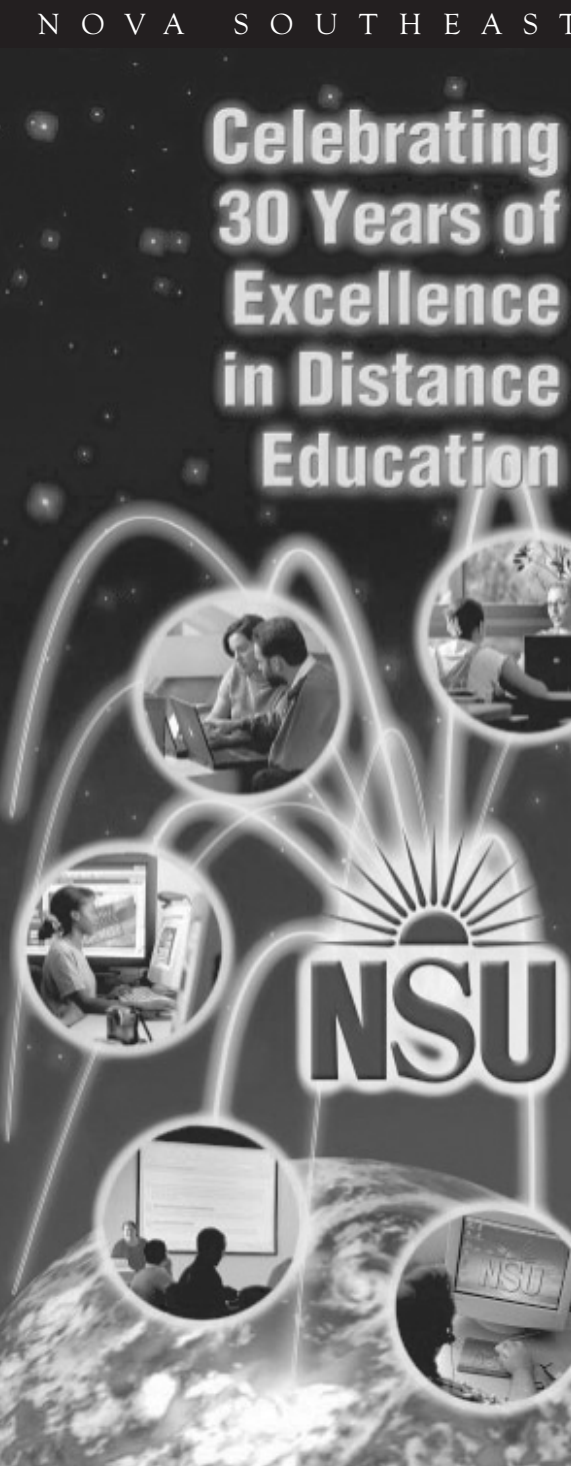
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# Getting Connected

## IP-Based Videoconferencing in K-12 Schools

**Barbara B. Lockee, Deyu Hu, and John Burton**

### WHAT IS IP VIDEOCONFERENCING?

**I**nteractive videoconferencing (IVC) has served as a reliable distance education delivery mode for over 20 years, in many cases replacing older conferencing technologies such as satellite-televised instruction and audiographics systems of the 1970s. However, the high-bandwidth, often proprietary network systems that support IVC are facing new competition. The Internet has developed not only as

a tool for global information-sharing, but also as a mechanism for efficient and cost-effective telecommunications. The substantial processing power of desktop computers, combined with pervasive network access, has made possible the development of videoconferencing applications that are inexpensive and easy to use. This type of communication system is sometimes called by its technical name, H.323 or Internet Protocol (IP) videoconferencing. The use of the Internet for videoconferencing

is rapidly evolving into a widely adopted tool for synchronous learning experiences in K-12 education.

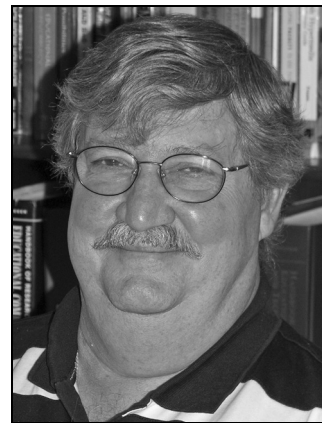
Network access is a necessary component of IP video systems, and the faster the better. Broadband connections can facilitate higher amounts of data flow, which is especially helpful for bandwidth-intensive video and audio communications. However, IP conferencing can occur over slower network connections, such as a dial-up modem, but the quality of the videoconference will likely diminish.



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Initially, these systems were used for person-to-person communication in business and industry. Desktop videoconferencing rapidly evolved to facilitate a variety of interactions, from one to one, one to many, small group to small group, and so on. Educational organizations were quick to shift away from older, more costly conferencing systems to these less expensive communications technologies. In some classrooms, individual computer stations are used for conferencing activities, while in others, the computer monitor is replaced with an LCD projector so that distant sites and presenters can be seen by an entire class at once. IP conferencing systems afford flexibility, allowing schools to customize solutions for a variety of instructional needs.

## **HOW CAN IP VIDEOCONFERENCING BE USED?**

Compared with room-based videoconferencing systems, IP videoconferencing systems are much cheaper and easy to set up, and are powerful enough to improve communication and collaboration. Thus, a variety of instructional efforts using desktop videoconferencing systems have occurred to advance student learning experiences, especially in K-12 education. The following examples illustrate how IP-based videoconferencing can be used in K-12 environments across different age groups, subject areas, and instructional needs.

### **COLLABORATIVE ACTIVITIES**

The use of an IP videoconferencing system does not have to be complicated. Interested classroom teachers can start out with simple ideas. As an example, the Boiling Water Project (<http://www.netc.org/>

[digitalbridges/uses/useeix2.php](http://digitalbridges/uses/useeix2.php)) utilized a two-way interactive desktop videoconferencing system to link an elementary school classroom in Helena, Montana with a high school science classroom in Portland, Oregon. Students and teachers on both ends boiled water at the same time and used IP videoconferencing systems to share their ongoing experiments. Participants on one side could see the boiling water on the other side and how students on the other side measured the temperature. During the session, students and teachers found that water boils at 212 degrees in Helena but at 202 degrees at Portland. They asked themselves why and found the answer. In addition, they found that they had to agree on a definition of boiling water. The videoconferencing system allowed students to easily collaborate with each other, which they would not be able to do otherwise. While being part of the communication, the teachers observed that an activity as simple as boiling water can get students more engaged in the instruction.

In addition to the collaboration initiated by individual teachers, many educational services provide collaborative opportunities for students to learn with peers in other classrooms and schools. Two Way Interactive Connections in Education (TWICE) is a Michigan-based organization that promotes collaboration in K-12 via two-way interactive videoconference. On their Web site (<http://www.twice.cc/projects.html>), they provide a list of exchange, multipoint, and international projects in which individual classrooms can participate. They also provide example projects to help beginners get some idea of how to make use of the videoconferencing systems. The National Internet2 K20 Initiative is another organization that aims to improve innovative use of technology in

education. Through their project search Web site ([http://k20.internet2.edu/projectfinder\\_index.php](http://k20.internet2.edu/projectfinder_index.php)), teachers can locate various projects involving the use of desktop videoconferencing systems. They can opt to participate in a project by visiting the relevant Web site or contacting the program organizer.

### **CULTURAL AWARENESS**

IP videoconferencing systems make it more convenient for students to meet their peers from another community, culture, or country. The East Meets West project (<http://www.araratcc.vic.edu.au/users/web/shodo/index.htm>) allows Australian students to communicate with their Japanese peers using desktop videoconferencing systems, e-mail, and Web pages. By showing and telling each others' experience, the students get first-hand exposure to different cultures. It helps them break down the barriers between them, acknowledge the differences, and learn to communicate with people from another culture.

This learning opportunity may come along with other activities designed for desktop videoconferencing. For example, in the water boiling project, by sharing pictures and experiences with students on the other end through the desktop videoconferencing system, students are able to overcome cultural and age barriers between them. They felt close to each other.

### **MEETING WITH EXPERTS**

Another application of desktop videoconferencing is that through the system K-12 students can meet scientists, entrepreneurs, famous politicians, community leaders, and other experts in various fields who may not be accessible in other ways

because of distance and their tight schedule.

Ask VU Live! (<http://www.vanderbilt.edu/virtualschool/live.htm>) is a series of activities involving IP videoconferencing. The goals of the activities are two-fold: to increase students' awareness about various careers and to foster their interests in those careers. The participants of the videoconferencing project range in age from 8 to 19. To acknowledge the age difference, there are three different sessions for elementary, middle school, and high school classrooms. Each scheduled session lasts for an hour and has at least two and normally three or four online sites. Depending on the situation, the presenter may physically visit a classroom that is connected to other distance sites through a desktop videoconferencing system. As an example, during the nephrology session, Dr. Thomas Daniel from Vanderbilt University visited the University School of Nashville. He presented to the third graders there while the presentation was made available via desktop videoconferencing systems to two other elementary classrooms and a middle school student who was sick at home. Students at a distance can watch the live presentation online and ask questions using the chat function built in the system.

To make the videoconference more effective, prepresentation and postpresentation activities were also designed (Virtual School at Vanderbilt University, 2005). In the prepresentation, the teachers guided students to think about some questions, such as the relevance of the activities to their classroom curriculum. During the postpresentation, except the discussion and question/answer session at the local site, the students were also asked to work in small groups on short presentations that they needed to present to peers

at other sites using desktop videoconferencing systems.

Another example of meeting with experts is the Scientist-on-Tap Program (<http://www.gsn.org/gsh/teach/articles/sot.html>), in which K-12 classrooms around the world can interact with experts and collaborate with peers using desktop videoconferencing systems. The interaction with experts greatly motivated students' learning and improved their ability in conducting research (Andres, 1995). Moreover, meeting with experts gives students chance to know the real world in a meaningful way. They are exposed to different professions and learn what it takes to be in a particular field. They gain access to a real role model. In the case of science, they may change their view about science and scientists and select a science-oriented career. In addition, this kind of activity can enhance students' skills in interpersonal communication.

### DISTANCE COURSE ACCESS

Due to various reasons, students may not be able to learn the subject on-site. In these cases, desktop videoconferencing systems can be used to provide distance courses. The SeaTrek Distance Learning Program was provided by Mote Marine Laboratory and Aquarium in Sarasota, Florida (<http://www.ihets.org/progserv/education/k20/seatrek/index.html>). Students in Indiana schools can participate in a series of distance learning curricula provided by this program. For example, in the course *Shark: Devouring the Myths*, students learn about the types of sharks, the fact versus myths about sharks, shark behavior, and the anatomy/physiology of sharks through the media-rich videoconferencing systems. They can also ask questions and talk to the presenter during the conference session.

As another example, the teacher involved in the boiling water project collaborated with his colleagues to help students with special needs access courses at a distance. They sent a laptop and a camera to students who were recovering from illness at home or in hospital. In this way, the students can participate and feel they are part of the classroom activities while they are not able to go to school.

### VIRTUAL FIELD TRIPS

For a variety of reasons, such as safety, cost, and protection of the field, it may not be feasible for students to have a particular fieldtrip. Under these circumstances, a virtual fieldtrip via desktop videoconferencing system can be used. Titanic 2004 (<http://oceanexplorer.noaa.gov/explorations/04titanic/welcome.html>) is such an example. In June 2004, Dr. Robert Ballard at the University of Rhode Island revisited Titanic, which he had found in 1985. In this trip, he and his team investigated the ship to find out the changes of the wreck brought by both nature and human activities over the 20 years. This scientific exploration was broadcasted to thousands of children in the United States using two-way teleconferencing systems, including Internet-based video conferencing. Students had a virtual fieldtrip of this "Look, don't touch" mission as it was happening (Weirich, 2004).

As another example, six high school students in West Warwick public schools in Rhode Island watched a live surgery at the Kent County Hospital. Through the desktop videoconferencing system, they first watched the whole surgery process and then held conversations with the operating team after the surgery (Monti, 2002). Similarly, fifth graders in Cape Elizabeth, Maine studied the anatomy of zoo animals through a desktop video-



conferencing system while the animals were more than 200 miles away from them (Bell & Unger, 2003).

As yet another example, while a teacher went to the Chimpanzee Human Research Institute (CHIN) to conduct her research, she brought an IP videoconferencing unit with her. Through the system, she discussed her research with the students and answered their questions. Both the teacher and the students felt that they benefited from each other's support via the interaction (<http://www.ri.net/RINET/products/ivid/projectgallery.html>). In this example, as well as all of the preceding examples, students were able to have experiences that they normally would not be able to engage in without access to desktop videoconferencing.

## CHALLENGES

The implementation of new technological systems is not without its challenges, and so it is with H.323 conferencing. The primary issues that users must face are related to scheduling, security, and bandwidth.

As with any event that is coordinated across differing school systems, scheduling often poses barriers to collaborative activities. Special arrangements may have to be developed to accommodate timing issues between or among orga-

nizations. Also, the location of the videoconferencing system may affect the ability to utilize it at certain times. The issue of access to the necessary facility, technology, and support is one that requires careful planning in advance.

## SUMMARY

IP videoconferencing systems are portable, affordable, and easy to use, while providing media-rich communication between people at different locations. Many classroom practices have showed that desktop videoconferencing can bring students opportunities to meet people and participate in activities that they would not have otherwise. It can greatly motivate students, enhance their cultural awareness, and improve their interpersonal and presentation skills. It also offers students a chance to learn technology by using it. With all of these benefits, K-12 teachers have integrated these technologies into instruction by providing students distance courses, virtual fieldtrips, meeting with experts, and peer teaching and learning. In addition, desktop videoconferencing can be used in many other ways, such as for teachers' professional development, administrative meetings, and technical support. As indicated by research scientist Larry Duffy at the Jet Propulsion Laboratory, who serves in the Scientist-On-Tap desk-

top videoconferencing program, "The possibilities for future education using this technology is limited only by our imagination and resourcefulness" (Global SchoolNet, 2004).

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### HOW CAN IP VIDEOCONFERENCING BE USED?

- COLLABORATIVE ACTIVITIES
- CULTURAL AWARENESS
- MEETING WITH EXPERTS
- DISTANCE EDUCATION COURSES
- VIRTUAL FIELD TRIPS

# Chat Transcripts

## Once the Chat is Over, is it Really Over?

Jose A. Saldivar

### INTRODUCTION

What happens in the chat room doesn't have to stay in the chat room. Yes, you are probably thinking that some chats are better off forgotten. Tried it, didn't work. Yet, there are times when there takes place some really intense and productive discussions; why let it stay at that? Once it's over, does it really have to be over? First of all, most chat rooms record the session in chat logs, which makes the conversation available for later perusal by the instructor or anyone having access to these logs. Why not take advantage of this fact, and use the

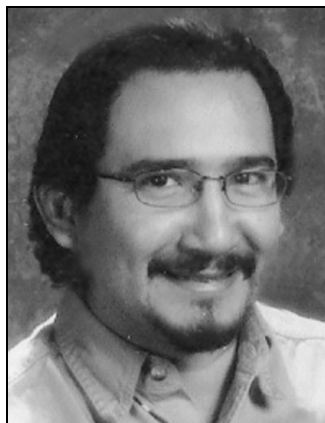
chat rooms for further elaborations to assist the students in having a better experience, and as supplemental instructional material. When the instructors are serious about their topics, they use whatever means to encourage active participation, and chat rooms have an important place within computer-mediated communications. Taking this communication tool to another level is this article's focus. When a coordinated chat is planned with students, some interesting ideas can be exchanged. As the instructor, you and your students may come up with some ideas that are worth saving and revisiting or highlighting. The chat transcript holds the key.

Although distance education or online learning environments laud the "anytime, anywhere" motto, there seems to be an overwhelming tendency among students to prefer a direct active interaction between the student and the teacher and the material being discussed. This reinforces the idea that more synchronous activities should be part of the overall learning experience. In reality, most distance education is done in an asynchronous setting, with mixed results of learning success. There is ample evidence that online learning has a better chance for success if teachers interact in synchronous communication activities (Swan, 2001). Studies show that interactivity must be bidirectional to be most effective. Moreover, when-

ever instructors participate in live online discussions, it leads to building a sense of community, and the learning outcome is superior to the one lacking the simultaneous feedback. It has often been documented that students are more motivated when they perceive a teacher's presence online (Curda & Curda, 2003).

Online courses, done properly, incorporate active participation by the instructor; "good instructors use adaptive behaviors such as pacing of instruction, personalized questioning and feedback and alternative explanations and sequencing to meet the needs of the learners" (McNeil, Robin, & Miller, 2000, p. 701).

A major question that arises when planning a chat room session is one of time and feasibility. Coordinating the time students will simultaneously be logged on is often problematic. It is possible to do this, but more often than not, some students cannot make the session because of circumstances beyond their control. With a chat room transcript, students would have a chance to view the interaction later, even if they had to miss the live chat session. What this entails, and what this article proposes, would be a remedy to ameliorate the lack of participation of some students because of unforeseen or unfortunate reasons. Not only will students who were



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present and participating be able to revisit the discussion and have available relevant feedback, but those students who were not present will get the chance to at least see the transcript and, hopefully, get some insight into what took place. Thus, the entire specific online course community benefits.

Within chat rooms, the opportunity to use inquiry-based dialogue seems to be applicable. Garrison, Anderson, and Archer (2000) write that critical thinking or inquiry is part of a "holistic multi-phased process" that involves a "triggering event," and that "learning how to think is embedded in what to think; that is, it is domain-specific and context-dependent" (p. 98). In the case of a chat session discussion, the triggering event one supposes would be that of the teacher posing a question related to a chosen topic, but it might also be a response provoking additional topic-related discussions.

The instructor must provide a focus; when students work collaboratively, having a focus makes students work together in building understanding between each other. Also, having a focus will make it easier for the instructor to lead the discussion (Veerman, Andriessen, & Kanselaar, 2000) and keep it on track. The instructor's feedback, as it pertains to the transcript, will provide a personalized interaction with students. This will at least give students the perception of having the instructor providing and establishing a presence online and actively interacting with the students, which is very important in developing a community of learners within distance education (Northrup, 2002).

If chat room discussion sessions are to be used to help build knowledge and, more importantly, understanding, then it is important they incorporate a sense of contribution. Shortly after a chat room discussion has taken place, the instructor will revisit the transcript, highlighting

what is important, while de-emphasizing the irrelevant inputs or responses by subduing the text that did not effectively contribute to the understanding. The author recommends that the less important transcript text be changed to a gray or lighter color, and possibly even be made slightly smaller in size. Conversely, the important text could instead be emphasized by making it brighter, bolder, or larger, so that nonparticipating students with little time would at least read over the main parts of the transcripts. Additionally, feedback juxtaposed to the transcript could be added, which would provide substantive and/or supporting comments praising ideas, suggestions, or comments that were relevant and made the discussion better. Also, instructors could at this point include their own instructions to specific students, give directions for further study or research, and/or provide links to related sources, and so forth.

An important feature of discussions and knowledge building is that "participants in learning communities need simultaneous access to the work of others to provide comparative models and opportunities to appropriate ideas more advanced than they might think of on their own" (Scardamalia & Bereiter, 1993, p. 4).

### **DESIGNING CMC VIA CHAT ROOM DISCUSSION TRANSCRIPT (CRDT)**

The discussions guided or initiated by the teacher would follow a set methodology, which would encompass the discussion itself, followed by teacher analysis of the transcript/chat log, thereby revisiting the discussion (constructing learning material from said transcript) and providing feedback juxtaposed to the highlighted transcript. There are

several benefits of doing and posting a postchat-analysis, for using chat rooms more productively and, hopefully, for providing a better educational value.

There are five logistical components to the proposed chat room discussions with asynchronous feedback: planning the discussion session; having the discussion; analyzing the chat log/transcript, with the instructor adding feedback; posting the chat log/transcript with instructions for students to revisit; having a follow-up session.

### **PLANNING A DISCUSSION SESSION**

There must be certain steps implemented for the discussion to be effective, and planning the discussion beforehand might seem an obvious thing, but without it, the discussion will be a fruitless activity. Therefore, the instructor has to decide what will be discussed, and the following are some suggestions pertaining to the role of the instructor.

- The instructor must decide what topic to initiate within the planned chat room session.
- Announce well in advance the session time and the topic to be discussed.
- Limit participation to a selected few who are available or interested in the topic. (It is suggested not to have all students participate in every chat session.)
- The instructor would be logged into the chat room a few minutes before the students.

Some suggested guidelines that will make the discussion more effective, and to prevent any confusion or waste of time, are:

- Students should announce their presence when logging in to the chat room.

- Direct students to refrain from chatting about irrelevant or non-topic-related issues.
- Require students to do some readings about the topic before the session, thus ensuring that at least some students will have some prior knowledge and be able to contribute meaningfully and knowledgeable. Examples of this could include: read a chapter in a textbook, peruse a Web site or Web page, view a video, interact with or use any material that might be relevant to the topic to be discussed, etc.
- It is suggested for the first session (if the instructor knows for a fact that many of the selected students have no experience in chat room sessions used for topic discussions), to make it a session on what to expect: what is and is not acceptable. This might be beneficial in order to prevent—and, if necessary, correct—any potential or real-time problems.

## HAVING THE DISCUSSION

While the discussion takes place, look out for the following or try to stay within these guidelines. Also realize that each discussion has a different flavor or personality, so be attentive to the mood and direction that the discussion is taking and persist in having the students be aware of what is appropriate, which can be mentioned within, and be reinforced after, the discussion, within the chat log transcript.

- Start the discussion with reiterating the topic, briefly reminding the students that they will be required to follow the guidelines and proper etiquette.
- Use inquiry-based questions to make students think about the topic.
- Control the direction of the discussion.

- The instructor must be the last person in the chat room at the end (to prevent questionable interactions between students).

## ANALYZING THE CHAT LOG/TRANSCRIPT, WITH THE INSTRUCTOR ADDING FEEDBACK

Before posting the chat room session's transcript, it has to be modified, enhanced, or have key points of the discussion further elaborated. Here are a few instructional methods that help in making the transcript useful.

- Subdue/negatively highlight the unimportant or nontopic comments or inputs from the chat transcript by converting the text into a subdued grayed out color, only slightly visible.
- Select the relevant and important comments and responses and make them bold, possibly even increasing the font size, for visual cue emphasis.
- Make a template with a table that has two columns; a copy of the transcript will be pasted into the left column and marked up, while juxtaposed on the right column will be any feedback

(which might include praise for an insightful comment, positive reinforcement for good critical thinking, making suggestions for alternative views to think about, placing hyperlinks for additional study, giving directions for specific, if not all, students, making assignments to specific or all students, etc.) (see Figure 1).

## POSTING THE CHAT LOG/TRANSCRIPT WITH INSTRUCTIONS FOR STUDENTS TO REVISIT

Posting the transcript along with feedback is the next step. This not only makes available the instructor's further elaborations on those students participating, and the instructor's own elaborations of anything else, but also makes everything available for those who were not in the discussion to begin with, for reasons already explained.

The instructor should post the transcript at a designated URL link or within a page that is part of the online course, thus only enrolled students can have access.

The instructor should also send out an e-mail informing students of the posted transcript and have them

| Chat Room Transcript   | Instructor Elaboration/Comments<br>(Added after the discussion)   |
|--|---|
| <p><b>Instructor:</b> Welcome to this discussion session.</p> <p><b>Instructor:</b> The discussion topic is_____.</p> <p><b>Instructor:</b> What is the most important consideration when thinking about this topic?</p> <p><b>Student:</b> I think the most important thing to consider is....</p> <p><b>Instructor:</b> Why do you think this is the case? The rest of the class argues for or against student 1's reason(s), after which he responds.</p> <p><b>Student:</b> Studies shows that when this type of ...</p> | <p>Student 1, your choice was appropriate, looks like you read the material.</p> <p>Your backing up your point with referenced material makes your argument more valid, yet your argument falls short as was pointed out by student 2. The main reason is because....</p> |

Figure 1. Simple chat room discussion transcript/feedback juxtaposed.

visit the page, made easier by just clicking on the URL.

Students should follow instructions, if any, dealing with the discussion/transcript. For example, ask students to prepare any questions regarding the transcript to be discussed in a follow-up session, pose questions about the transcript topic, and make it into an assignment that will be counted as a grade, etc.

If there is to be a follow-up session, make an announcement of when it will be held and who is expected to participate. If a new discussion is to take place, then follow the same guidelines mentioned above.

### HAVING A FOLLOW-UP SESSION

Having a follow-up discussion could be beneficial, if it turns out that the first discussion contributed to students' studies and learning, and this is the opportunity to practice this instructional methodology and improve its use.

- Revisit the previous discussion topic.
- Ask for constructive criticism or feedback from students.

- Let students ask questions related to the transcript and the feedback.

### CONCLUSION

Students expect the instructor to be a presence within online courses because most, if not all, courseware provides the chat room communication tool, so why not use this? Be aware that since chat room session logs are saved, they can become available for others, such as administrators, to see or use, when it becomes necessary. Why not prevent any misuse or misinterpretation, if you use this tool within your online course? Use it to guide, to teach, to elaborate, and to make students realize that what they say can be important and can lend to the overall learning process. Although initially it might seem that this instructional strategy is slightly more time consuming (only a few chats are recommended during a course), the author believes that it will be worthwhile to pursue this course of instruction in order to maximize the benefit of chat room discussion sessions and enhance meaningful and gainful participation.

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# The Evolution of Distance Education

**Monica W. Tracey and Rita C. Richey**

Educational programs in which students and the instructor are separated by place and often time are currently the fastest growing form of instruction both in the United States and throughout the world (Gunawardena & McIsaac, 2004). This is commonly known as distance education, and even though it may currently be viewed as innovative, distance education dates back to the early 1800s (Verduin & Clark, 1991). To a great extent, the evolution of distance education has paralleled advancements in technology, but its development is also a reflection of changing educational values and

philosophies. This article has three purposes: to describe the growth of distance education over the past 2 centuries; to identify factors which have facilitated this growth; and to identify emerging conceptual orientations in distance education thinking.

Over the years, many terms have been used to describe distance education. These include distance learning, open learning, networked learning, flexible learning, distributed learning, independent study, learning in connected space and, today, on-line learning is common. However, distance education (by any name) is generally recognized

as a structured learning experience that can be engaged in away from an academic institution, at home or at a workplace, and can lead to degrees or credentials (Gunawardena & McIsaac, 2004; Simonson, Smaldino, Albright, & Zvacek, 2000).

## EARLY FORMS OF DISTANCE EDUCATION

### DISTANCE EDUCATION VIA CORRESPONDENCE

The first generation of distance education was print-based correspondence study, and print continued to be the predominant delivery medium for distance education until the beginning of the 1970s (Garrison & Shale, 1987). In pre-industrial Europe, education had been available primarily to males in higher levels of society but, in the 1800s, with the event of the first correspondence program, the doors of education slowly opened to the rest of the population. For example, an advertisement in an 1833 Swedish newspaper touted the opportunity to study "Composition through the medium of the Post" (Bratt, as cited in Verduin & Clark, 1991, p. 15). In 1840, England's newly established Penny Post allowed Isaac Pitman to offer shorthand instruction via correspondence. Three years later, instruction was formalized with the



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founding of the Phonographic Correspondence Society, the precursor of Sir Isaac Pitman's Correspondence Colleges (Dinsdale, as cited in Verduin & Clark, 1991). In 1886, H.S. Hermod, of Sweden, began teaching English by correspondence, which led to the founding of Hermod's in 1898, one of the worlds largest and most influential distance teaching organizations. Distance education flourished in Britain in the late 1800s with the founding of a number of correspondence institutions, including Skerry's College in Edinburgh in 1878, and the University Correspondence College in London in 1887 (Curzon, 1977).

This movement ultimately made its way across the ocean to the United States. Correspondence study was integral to the University of Chicago which, in 1890, created a university extension as one of five divisions, the first such division in an American university. The extension division was divided into five departments: lecture study, class study, correspondence teaching, library, and training. The correspondence study department was successful in terms of student enrollment; each year 125 instructors taught 3,000 students enrolled in 350 courses (Rumble, 1986).

In 1891, Thomas J. Foster, editor of the *Morning Herald*, a daily newspaper in eastern Pennsylvania, began offering a correspondence course in mining and the prevention of mine accidents. His business developed into the International Correspondence Schools, a commercial school whose enrollment exploded from 225,000 in 1900 to more than 2 million in 1920 (Simonson et al., 2000).

In the late 1800s, Anna Eliot Ticknor founded a Boston-based society to encourage study at home, which attracted more than 10,000 students in 24 years. Most of these students were women for whom traditional education opportunities

were limited. They corresponded monthly with teachers, who offered guided readings and frequent tests (Aggasiz, 1972). William Rainey Harper's (1890) correspondence study, an alternative to traditional education, was designed to provide educational opportunities for those who were not among the economic elite and who could not afford full time residence at an educational institution. Many saw it as simply a business operation, and viewed this alternative as inferior education. Moreover, these distance opportunities extended education potentially to the masses, an extreme departure from the undemocratic educational system that characterized the early years of U. S. history.

However, the need to provide equal access to educational opportunities was the cornerstone of educational democratic ideals, so correspondence study took a new turn (Gunawardena & McIsaac, 2004). The French Ministry of Education set up a government correspondence college as a reaction to the Second World War and the need to train new soldiers while continuing to educate those who may not have been able to come to one location. In addition, Le Centre National d'Enseignement par Correspondences was established to educate children, although it has since become a distance teaching organization for adult education. The goal of these programs was to widen learners' intellectual horizons, as well as provide the chance to improve and update professional knowledge. It allowed individuals the flexibility of learning in their own time and place (Simonson et al., 2000).

## **DISTANCE EDUCATION AND EARLY TECHNOLOGIES**

With the invention of the spark transmitter by Guglielmo Marconi in 1894, communication through-

out the world changed forever. Marconi's "Black Box" was patented and the first Wireless Telegraph and Signal Company formed in 1897. By the early 1920s, at least 176 radio stations were constructed at educational institutions, although most were gone by the end of the decade (Simonson et al., 2000). Although rarely used in the United States today, in many developing nations radio is still the primary means of distance education. An example of this is a program in Nepal, "enter-educate," a serial radio soap opera broadcast which uses an innovative format of drama and call-in interactive education with radio as its delivery medium (Story, Boulay, Karki, Heckert, & Karmacharya, 1999). It is in these developing countries that radio programming has been used innovatively to either support or supplement print based materials or to carry the majority of the course content.

Educational television teaching programs were produced at the University of Iowa's W9XK between 1932 and 1937 (Koenig & Hill, 1967). However, it was not until the 1950s that college credit courses were offered via broadcast television. Western Reserve University was the first to offer a continuous series of such courses in 1951, and Sunrise Semester was a well-known televised series of college courses offered by New York University on CBS from 1957 to 1982.

In the 1960s, satellite television was introduced and this, in turn, enabled the rapid spread of instructional television. The following decade federally funded experiments in the United States and Canada, such as the Appalachian Education Satellite Project (1974-1975), demonstrated the feasibility of satellite-delivered instruction. The first state educational satellite system, Learn/Alaska, was created in 1980 and offered 6 hours of instructional television daily to 100

villages, some of which were only accessible by air. TI-IN Network, a privately operated network in San Antonio, Texas, has delivered a wide variety of courses via satellite to high schools across the United States since 1985 (Simonson et al., 2000).

During World War II, Signal Corps Captain John Mullin found Magneto phones at Radio Frankfurt in Germany and 1,000-meter reels of 6.5mm ferric-coated BASF tape with a 20-min capacity. He mailed two machines to the United States with 50 reels of tape, and after the war worked on them to improve the electronics (Mullin, 1979). At the same time, Paul Klipsch patented the Klipschorn folded horn speaker. The innovations in speakers and amplifiers and tape recorders after World War II contributed to the birth of a "Hi Fi" era that produced stereo and transistor radios and cassette tape players (Augspurger, 1985).

Today, audio and video cassettes have been largely replaced with CDs and DVDs. These devices still afford learners control over the material because they have the flexibility of determining where they learn, at home or at work (Gunawardena & McIsaac, 2004). This cost-effective medium has been used to supplement print and other media, and it can provide valuable resource materials for distance learners.

## **MODERN FORMS OF DISTANCE EDUCATION**

### **TWO-WAY SYNCHRONOUS COMMUNICATION**

In recent times, a widely used form of technology-based distance education used a live two-way audio connection. This facilitated synchronous learning environments in which message senders

and receivers could communicate with one another at the same time, even though they were separated by distance. This technology was then expanded by incorporating electronic methods of sending graphical information (Simonson et al., 2000). This form of direct, live communication between the instructor and the learner uses television, both open-broadcast and cable, and interactive instructional television (ITV). At one time, using live television to broadcast courses was one of the most popular forms for delivering distance education in U.S. organizations. When state governments in the United States began to establish statewide distance education networks, interactive television systems (ITV) became a popular medium in state educational systems as well. ITV can transmit either two-way video and two-way audio or one-way video and two-way audio to several distance locations (Gunawardena & McIsaac, 2004). The British Open University and other international universities also use interactive broadcast television extensively to deliver programming to a large number of distant learners.

### **COMPUTER-SUPPORTED AND ONLINE LEARNING**

Computer-supported learning, the fastest-growing form of distance education today, incorporates numerous advances in technology. Although credit and noncredit courses have been offered over computer networks since the mid-1980s (Ackermann, 1995), the development of laptop computers, personal digital assistants (PDAs), CD-ROMs, DVDs, and the World Wide Web provide learners with numerous learning environments. In addition, these technologies give instructors the opportunity to act as learning facilitators, rather than simply suppliers of information.

Laptop computers give learners the ability to carry text-based information and to communicate with other learners and instructors throughout the world through the World Wide Web. PDAs are handheld microprocessors that provide all of the advantages of a laptop computer but are smaller and less expensive and are able to work with computers or alone to assist learners in accessing numerous types of information and records. CD-ROMs allow learners the opportunity to access large audio and digital files on a personal computer and are quickly replacing previous generations of audio and video technology.

## **FACTORS THAT FACILITATE THE GROWTH OF DISTANCE EDUCATION**

### **THE IMPACT OF PROFIT-MAKING INCENTIVES**

Higher education is going through a number of changes as a result of advancements in computer technology. One impact of developments in technology is a significant rise in institutions offering online flexible learning opportunities. The Internet has created a new level of competition to higher education with the entry of for-profit online universities that are competing with traditional educational institutions offering alternatives to classroom-based instruction. Educational institutions are responding by offering online versions of some traditional campus-based programs and in some cases creating virtual campuses to complement their traditional "brick and mortar" campuses (Shaik, 2005). Colleges and universities are also turning to for-profit companies to create for-profit subsidiaries to deliver distance education (Bleak, 2002). Additionally, institutions are collaborating to

offer joint online programs and are engaged in a variety of joint business ventures with for-profit organizations that have provided courseware, hardware, and other support services. The long-term success of these different entrants into the online distance education market, however, is unclear and will depend on how the various providers of online education are viewed by learners, the variety of educational communities, professional organizations, and the public at large.

### THE IMPACT OF GOVERNMENT

Coinciding with the rapid rise of technology, a wide variety of information is now available to U.S. citizens. Correspondingly, the U.S. government has begun to study the effects of this technology on education on a national level. The bipartisan Web-based Education Commission, created in 1998, was charged with studying how the Internet can be used in education at all levels, including prekindergarten to job retraining. This commission specifically focused on what barriers may be slowing the spread of Internet use. The commission's report, "The Power of the Internet for Learning" (2000) recommends that online-learning become a centerpiece in the nation's education policy.

The House Education and Workforce Committee and the Subcommittee on 21<sup>st</sup> Century Competitiveness approved H.R. 1992, a bill to expand Internet learning opportunities in higher education. The Internet Equity and Education Act of 2001, which has yet to pass, would repeal the rule that requires schools to provide at least 50% of their instruction in person, and the "12-hour" rule that requires students to spend at least 12 hours per week in class during a traditional semester. In addition, this bill would

allow students to use federal loans to pay for a college education delivered entirely over the Internet making it the first step toward making the Web-based Education Commission's recommendations a reality (Gunawardena & McIsaac, 2004).

## EMERGING DE CONCEPTUAL ORIENTATIONS

There is a growing knowledge base encompassing the area of distance education, specifically in the areas of independence and autonomy, and interaction and communication. The development of these lines of thinking continues to impact distance education practice, especially with respect to the use of technology.

### INDEPENDENCE AND AUTONOMY

Charles Wedemeyer (1977, 1983) viewed the essence of distance education as the independence of the student, preferring the term independent study versus distance education at the university level. Wedemeyer emphasized learner independence and adoption of technology as a way to implement that independence. He maintained that the separation of teaching from learning was a way of breaking education's "space-time barriers" and noted four elements of every teaching-learning situation: a teacher, a learner or learners, a communications system or mode, and something to be taught or learned. Wedemeyer proposed the reorganization of these elements to allow greater learner freedom. The success of distance education for Wedemeyer was the development of the student and teacher relationship.

Following this tradition, Moore (1994) argues that in most school settings learners are dependent on

the teacher; the teacher is active, and the students are passive. In a distance education environment, on the other hand, because there is a physical gap between the teacher and students, students must accept a higher degree of responsibility for their learning. Therefore, autonomous learners need less help from the teacher. Moore classifies distance education programs as being either autonomous (learner-determined) or non-autonomous" (teacher-determined). The degree of autonomy in a given program is determined by who selects the learning objectives, resource persons, and media, and who makes the decisions about learner performance evaluation.

### INTERACTION AND COMMUNICATION

In 1985, Borje Holmberg (1985) identified key assumptions underlying distance education. He believed that the core of teaching is interaction and emotional involvement. Moreover, Holmberg maintained that a personal relationship between the teacher and the learner contribute to learner pleasure and subsequently supports learner motivation. The student's ability to make learning decisions not only facilitates the learning process, but student motivation as well. The depth of the students' learning, in turn, demonstrates teaching effectiveness. In 1995 Holmberg extended his analysis of this process by asserting that the independence fostered by students' freedom of choice in distance education programs can make an important contribution to their continuing as life-long learners (Holmberg, 1995).

Moore (1989) identified three types of interaction in distance education: learner-content interaction, in which learners interact with the content; learner-learner interaction, in which learners interact with fel-

low learners exchanging information and ideas about the course; and learner-instructor interaction, in which the instructor provides feedback and motivation to the learners. Learner-instructor interaction is necessary for many educators and important in learner application of new knowledge. A fourth component of Moore's model of interaction was added by Hillman, Willis, and Gunawardena (1994); learner-interface interaction, which focuses on the interaction between the learner and the technology that delivers instruction.

The continuing development of these ideas will ultimately impact the all forms of distance education, including the use of distance education hardware and its interface with the learners.

## CONCLUSIONS

Distance education has evolved for almost 200 years and will continue to progress to meet the needs of societies both in the United States and abroad. It holds out the promise of bringing education to a dispersed global population, and it can also provide education to those constrained by the demands of daily life. The evolution of this phenomenon, as well as its future growth, will undoubtedly be shaped to a great extent by technological advancements and refinements. These innovations, however, must be matched by research and theoretical explorations of those DE methods that promote not only student engagement in the learning process, but an inquisitive, skilled and intellectually-able population.

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# Improving Online Courses

## What is Interaction and Why Use It?

**Wilhelmina C. Savenye**

### INTRODUCTION

Schools are increasingly turning to online technologies to enhance their students' learning experiences. These experiences may take the form of fully online courses, usually offered at a distance, or online modules and materials to supplement classroom instruction. For example, the National Education Association (NEA) has published an extensive guide to online high school courses (NEA, 2002-2005). Johns Hopkins University's Center for Talented Youth (2004) lists three full high school programs, along with many that offer courses and programs.



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Happily, we have come a long way from the "early days" of online learning. This means that most educators realize we are far beyond simply putting materials on the World Wide Web and thinking these constitute complete instruction. Online courses now can rely on the communication tools of the Internet, including e-mail, discussion boards, listservs, chat, and teleconferences, to foster considerable interaction among students, with their instructor and beyond.

Most of us who have offered online courses for several years have found that students often take these courses not because they are at a distance, but because they prefer the opportunity to work on coursework without coming to campus, and at any time they prefer, day or night, weekdays or weekends. One highly technical high school student, for instance, says, "I'd also love to take online classes in subjects I don't have time for during the school day" (McAdams, 2004, p. 15). Communication and interaction tools allow us to meet these students' need for powerful, effective online courses.

In K-12 schools, Morris (2002) advises, there are many potential audiences for online courses, and most programs should focus on one or two related audiences. For instance, after studying students' needs, her district decided to initially design its online program for home-schooled students, as well,

possibly, as students who might be homebound due to illness. She adds that online K-12 programs could be designed for dropouts, students with young children, students who have failed courses or been expelled, advanced placement students, or those looking to supplement their school's classes, but programs for these audiences would necessarily differ in their design.

Online learning can take the form of fully Web-based courses; hybrid courses, which include both Web and classroom sessions; campus courses with Web supplements; and stand-alone materials and software for learning (Savenye, 2004a).

The focus of this article is on fully online distance courses, with the idea that techniques and strategies that have proven of value in these courses can be implemented by instructors who wish to use online learning in other ways. We'll focus, too, on the teacher who is also the course developer, though, as Moore and Kearsley (2005) have noted, in a systems approach to distance learning, courses are often developed by a team of instructional design and technology experts, with a subject-expert teacher, and then other teachers may actually teach the course. Morris, in her comprehensive guide for districts wishing to design an online school program, has called these implementing teachers "mentors," adding that

teachers who are paid to develop courses, and subsequently teach them, should also receive pay for being mentor teachers (2002). These implementing instructors may also be called tutors, facilitators, coaches or, of course, teachers.

## **WHAT IS "INTERACTION," AND WHY USE IT IN ONLINE COURSES?**

Interaction in online courses has been defined many ways. First of all, interaction is considered to be communication among the participants in the course, especially the students and the instructor. "Communication is what separates true online learning from Web-based tutorials" (Lehmann, 2004, p. 9), and communication is the key to interaction. Moore's is the most common definition of interaction, and he includes three types of interaction, namely that between learners and either the instructor, other learners, or the content itself.

Interaction has been identified as a key factor in the success of online courses. It can lead to increased student achievement (Zirkin & Sumler, 1994). Learner outcomes related to technology skills, in particular, can be powerfully fostered using interaction. For instance, Roblyer (2000) outlines the National Educational Technology Standards (NETS) developed in a collaborative effort by the International Society for Technology in Education (ISTE, 2000-2004) and funded by NASA and other governmental, non-profit, and business organizations. The NETS include standards developed for elementary and secondary students, teachers, and administrators. Many of the NETS standards describe skills related to interactive communication technologies. For instance, under #4, Technology Communications Tools, "Students use telecommunications to collabo-

rate, publish, and interact with peers, experts, and other audiences," and "Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences" (ISTE, 2000-2004). Others of the standards involve research and collaborative research using technology, evaluation of technology resources, and problem-solving and analysis skills. Roblyer includes in her review an extensive list of activities teachers can use to teach the NETS standards, and many of these activities require interaction.

Similarly, beyond the obvious skills in using technology, the NETS standards for teachers require applying technology to such areas as "teaching, learning, and the curriculum," "planning and designing learning environments and experiences," and "social, ethical, legal, and human issues" (ISTE, 2000-2004). Skills in these areas rely heavily on interaction, so teachers can improve their own skills while helping their students.

Interaction in distance courses can enhance student satisfaction (Fulford & Zhang, 1993), motivation, and retention, and these, too, are powerful reasons to increase the levels and types of interaction in online instruction

## **WHAT MAKES A GREAT ONLINE COURSE?**

A successful online course is a mix of good content, good planning/organization, and good interaction. The content is the responsibility of the teacher; it goes without saying that the content must be accurate, matched to learning outcomes and assessments, and be up-to-date and engaging to students.

Course planning and organization relies on a teacher's skills in designing instruction. As Lamb and Smith contend in their "ten facts of

life for distance learning courses," good "planning shows," adding, "The better the planning, the more successful the implementation" (2000, p. 13.) Meyer, in fact, in her review of research on the impact of the Web on student learning, contends that one of the benefits of the development of online learning is the "renewed focus on pedagogy and instructional design" (2003, p. 20). She considers instructional design, along with individual differences, and interaction, to be the three major areas of research that aid the development of online learning practices.

Finally, Moore and Kearsley (2005) remind us that a good distance course requires a balance of good presentation, that is, content and organization, along with interaction, with neither overpowering the other.

Additionally, student factors influence how successful they are in online courses. Students who are more successful tend to be more independent, more self-motivated, and more self-regulated than students who are less so. Not surprisingly, students who have better computer technology skills, and those who have taken an online class before tend also to be more successful. Currently, online course technologies rely heavily on text, so good writing skills are also important for students' success.

Roblyer and Marshall (2002-2003) describe an Educational Success Prediction Instrument that they tested with participating students and teachers from the Concord Virtual High School (The Concord Consortium, 2005). They found in this study that students who do not drop out and who pass an online course tend not to differ from those who do not succeed on personal characteristics. Instead, more successful students tend to have stronger beliefs they will succeed, higher self-responsibility, higher self-orga-



nization skills, and better technology skills and access. Fortunately, Roblyer and Marshall remind us, many of these attitudes and personality characteristics can be influenced by a teacher or by an online program. It is our contention that interaction can be of great help in influencing many of these success factors.

## **HOW CAN WE IMPROVE INTERACTION IN ONLINE COURSES?**

Right off the bat, let's note that there are as many different educational, pedagogical, and philosophical models of teaching as there will be online courses and teachers. Therefore, interaction will not take the same forms in each teacher's course, or even in different courses from one teacher. In fact, Moore and Kearsley (2005) suggest that how interaction is designed and carried out depends on the designer's/teacher's philosophy of instruction, type of content, age and development level of the learners, and the course technologies.

In this brief article, we will look at improving interaction in stages; first, how to plan and organize an online course, and what to do before the course begins. Then, we will discuss methods to foster interaction during the course; and, finally, we'll look at what to do at the end of the course, and beyond.

### **BEFORE THE COURSE BEGINS**

Initially the course must be planned and organized from scratch, or converted for online delivery. Let's consider the student success factors we discussed earlier; students who are more self-motivated, self-organized, self-regulatory, and independent, as well as those with better computer skills, tend to do better in online courses.

It is the instructor's responsibility to help all students succeed, and there are many ways we can help them. First of all, an online course needs to be even more organized, structured, and planned ahead of time than a campus course, yet there should be room in the course plan for plenty of student input, questions, and feedback.

The course content should be completely planned out ahead of time, while considering what you might need to do to adapt content as the course progresses. Consider the tradeoffs of "depth versus breadth." Active learning takes time, as does interaction. While some instructors find students can "cover" more content in an online course, many of us find that we prefer to cut some content to foster deeper learning and longer-term retention.

Develop and post all or almost all of the course content before the course begins. Write materials for the World Wide Web rather than for the printed page. This includes "chunking" information, streamlining content, and including lots of up-to-date links to other information students might need. Include media and other types of resources where possible to aid students with various types of learning styles.

Develop an online syllabus that is very detailed and also accessible in short, clear sections, so it is easy for students to know what is ahead. Include in the syllabus an overview of the course; learning goals and outcomes; technology requirements to succeed in the course, resources students need to buy or access, major projects and requirements, your expectations of them, grading criteria, honesty policies, etc. Usually, online students also prefer to be provided with a detailed calendar that includes readings, activities, and due dates that so they can plan ahead and schedule their time. Ko and Rossen

(2001), in their guide to online teaching, illustrate a sample online syllabus, as do Palloff and Pratt (1999) in their book on building online learning communities.

Select what tools and features of the online system you will use, or select a system if your organization does not support one. For instance, the Blackboard (Blackboard, Inc., 2005) course management system supported at our university includes templates for the course home page that allows instructors to post course and staff information, course documents, and course content or lessons, by week or unit, as instructors choose. It includes testing, survey, gradebook and course statistics tools. Most importantly for interaction, Blackboard also includes e-mail, several types of asynchronous discussion boards, synchronous/live chat tools, student-student and student-instructor file exchanges, and other group collaboration tools. Determine if you would like to incorporate other technology tools such as video streaming, PowerPoint presentations, handouts and notes pages (complete or with blanks), audio and/or videoconferencing, listservs, or blogs. Learn the tools yourself ahead of time, either on your own, through resources from the vendor or on the Web, or by participating in training provided by your organization.

Based on the student learning goals and outcomes, develop the course activities with a focus on fostering meaningful and engaging interaction. Here is where the fun really begins, and there are many resources to help you.

Instructors often include online lectures and readings with which students interact to learn content. However, to these now can be added interactive links, discussions, and other activities. Activities may include computer-based practice sets, online asynchronous dis-

cussions, and synchronous/live chats, with students participating individually or in groups. The instructor may moderate, but it is worthwhile to have students serve as moderators and facilitators, individually or in groups. Using these interaction tools, debates, simulations, role-playing, and case studies can be carried out. Students can work collaboratively or cooperatively in groups to build projects, conduct real or Internet-based research, do experiments, or solve problems. Computer-based simulations or apprenticeships supported by the Internet are typically also done in groups. Papers can be written individually or in groups. Peer reviews are particularly useful interaction activities, with students using the same rubric the instructor will use later for grading. Some instructors have students keep online reflective journals or logs, either to record their experiences developing a project, or to monitor their own learning. Instructors may interact individually with students about their journals, while students may post other forms of the journal for peer reviews. Reports, presentations, discussions, and reflective logs may be used. We have also conducted electronic field trips and guest lectures at various times using chat, discussion boards, e-mail, and video- or audio teleconferencing.

Once the course is developed, there are several more things to help students prepare for the course the week or so before school begins. One is to secure enrolled students' e-mail addresses, if the site doesn't already provide them, and to send students a letter describing how to get ready to start the course and what to expect.

## DURING THE COURSE

If possible, conduct an orientation for students, either face-to-face or online, to help them get started.

Lots of e-mail and a few online "office hours," using chat, can help students get started. Consider phoning students who may not respond to e-mail early on.

Lehmann (2004) emphasizes that, throughout the course, instructor interactions must support and encourage students, motivate them, and provide feedback. During the first week, we have found it critical that students get to know each other and the instructor, at the same time as they get to know the course and the interface. Icebreaking discussion activities can require that students learn the discussion and chat tools while getting to know each other in an enjoyable way. If you plan for them soon to begin to form groups to accomplish papers or projects, it is useful in the first few weeks to include activities that help students to know more about each other's interests and skills.

Since the more skilled students are with the tools of the course, the more successful they may be, these activities should introduce them to the skills and provide them lots of relatively stress-free practice.

During these weeks, as throughout the course, it is worth bearing in mind that Hanna, Glowacki-Dudka, and Conceicao-Runlee, in their book, *147 Practical Tips for Teaching Online Groups* (2000), remind us that the instructor is always responsible for what goes on in the course, and often has to be a troubleshooter. Especially during the early stages, too many technical problems can lead students to drop the course.

Again, if you plan to rely on considerable group work, consider, as the course progresses, incorporating more icebreakers and other types of activities that will enable students to get to know each other even better, so they trust, communicate, share, and enjoy each other, as well as learn how to work together.

Most courses rely heavily on file transfers, e-mail, and asynchronous

online discussions, often along with synchronous chats (with or without whiteboards), as the communications tools for deploying interactions in course activities. Also often used are teleconferences and instant messaging. While a detailed description of how to work with each of these technologies is beyond the scope of this article, we'll suggest a few tips, techniques, and strategies here.

**File transfers:** While not necessary, in many online courses it is valuable to use a course management tool that allows students to upload their papers and projects easily to the instructor, without using e-mail. The instructor then, too, can easily use this tool to check who has turned in assignments, possibly briefly e-mailing those who have and have not. Using file transfer tools like this keeps the instructor's e-mail free of large files and helps the instructor to not miss projects coming in amidst the rest of his or her e-mail.

Assignments can then be easily reviewed and feedback sent to the student. We often do this by using "track changes" tools in our word processor directly within the file so students can easily see our notes. It is a good idea to teach students to use standardized file names, so the instructor does not end up with, for instance, 25 "project one" files, which might copy over other students' files with the same name when uploaded. We like to ask students to use file names that include the course number, their last name and the project title for this reason. We also remind students to regularly update their virus software, and we use ours to check files when downloading them.

We also use the file transfer areas in Blackboard "groups" tools so students can post drafts for peer review or collaborative project elements where other students can easily download them.

**E-mail:** Managing e-mail efficiently can be a challenge for online instructors. Most instructors let students know early on about how long to expect to wait for a reply to an email; 24 or 48 hours is about right. Lehmann (2004) suggests that if the instructor can secure a separate e-mail account for the online course, it is a good idea to do so.

Students might be told to use message header conventions, such as the course name, their name, the message topic, and level of urgency, to aid the instructor in catching and quickly responding to course e-mails, since students have few other ways to ask questions privately of the instructor, unlike in a face-to-face course that meets regularly. This also helps the instructor who uses folders for each course, each assignment, and whether it has been graded or not.

We have also participated in a sort of online guest lecture in which students read or viewed our "lecture" ahead of time and then a time was set aside for us to "meet" with students from that course to answer their questions. (If the guest lecturer can be included as a participant in the course Web site, and thus have access to the discussion board and chat, this works a bit better, but e-mail can be used.)

**Asynchronous online discussions:** Online discussions have become fairly standard tools in online courses; however, instructors should consider how specific course goals and learning objectives will be fostered by each type of discussion. Educators new to online learning are often surprised to find that less-participative students in face-to-face classes may participate more in online discussions. Some students often note that they prefer online discussions, because they can take their time to formulate their answers, and their input to the discussion "weighs" as much as that of more typically vocal students.

Another value to online discussions is that they are archived so students can access them continually. Some online educators feel that this means students actually are part of the creation team for each online course, and that no matter how often taught, each course experience for each class of students is unique.

There can be a few drawbacks to online discussions. For instance, students must participate or there is no "class." We have found that we do need to allocate points in the course for this and if we require a lot of discussion, students ask that the points be allocated accordingly. We have found that requiring students to post at least twice a week, with guidelines for what we require and how they will be scored, has worked well for us, though some online instructors require more frequent discussion postings. Also, students must rely on typing and reading skills, and students find that they need to devote considerable time each week to participating. We have found that in large classes, with several postings required per week, the reading can become daunting, so students appreciate being divided into smaller groups.

In order for the online discussions to have value, care must be taken to build good discussion questions. Ko and Rossen (2001), as well as Hanna et al. (2000), provide guidance for building these questions. We have found that having students develop questions and moderate or facilitate discussions is very productive. Before they become moderators (for which they work in teams and are graded), we model the moderator role for students and have them read and sometimes discuss guidelines for discussion moderating (Berge & Collins, 2003).

Instructors may consider having different types of discussion, some

whole-class: in some small group, depending on projects; some with outside experts; and some that are more social, such as an online café or coffeehouse.

**Synchronous chats:** Most course management systems include tools for synchronous chats, sometimes called virtual class or classrooms. Chats are particularly useful for holding online office hours. We also use chat tools for students to discuss and work on group projects. We have found chats to work well for problem-based learning projects, in which the instructor can "hold class" in a whole-class chat forum, using a white board and going to Web sites to show students the "case" or problem scenario, and then having students break into smaller chat rooms to work on aspects of the problem for specific time periods, after which they come back to the whole-group chat.

Not all students enjoy or value chats. One problem with them is that all participants need to arrange to be online at the same time. For our adult students, who often enroll in online courses in order to complete their work when they like and around their work and other responsibilities, chats are hard to schedule. This might work more easily with K-12 students who are enrolled in a particular course at a particular time. However, we have found that setting up a few times during the week for the chat allows students to sign up for a time convenient to them. This also keeps the chat groups relatively small. We have found that from four to six participants works well. Of course, this may mean that the instructor is participating in quite a few hours of chat that week, so it works best for particular course goals, and perhaps not every week.

Another drawback to chats is that students need to type quickly and sometimes find it difficult to keep up with reading the discussion

while composing answers. Instructors, too, sometimes find this difficult.

As with online discussions, chats are more productive when the moderator makes clear the questions or topics to be discussed, and keeps the discussion focused on the topic. We have also used chats to allow students to make presentations, with them posting their materials ahead of time and then discussing them in the chat.

**Teleconferences:** Many instructors use teleconferencing tools to add to the level and types of interaction in their courses. In the years to come, these are likely to be provided by our teaching institutions and within the course software; however, even now instructors can use phone, audio files and tools, and video in the course. Audioconferencing by phone can provide immediate answers for students in trouble with a project. However, it can also be used, if resources allow, to give all students a chance to talk with the instructor and each other, and ask questions as the course begins, becoming a powerful tool for forming the foundation for the class community. Videoconferencing tools are becoming less costly. We have used them to bring in guest speakers and to allow students a chance to make presentations to each other, as well as to get to know each other. Some instructors have conducted videoconferences to allow student groups to work across large distances. Again, for most such conferences, all students need to participate at the same time. Moore and Kearsley (2005) provide further guidelines for conducting teleconferences.

**Instant messaging:** K-12 students are typically more comfortable with instant messaging tools than are their instructors. That is one reason we ought to consider using them. Lehmann (2004) suggests using

instant messaging as another tool for online office hours. She adds that students can use it to work on group projects. As with chats, one benefit of using instant messaging over the telephone, in addition to possible long-distance charges, is that a transcript of the discussion is recorded. Also as with chats, to use instant messaging all participants must be online.

### ASSESS STUDENT LEARNING AND COLLECT DATA ON AN ONGOING BASIS

As the course proceeds, assess student learning on an ongoing basis, using multiple methods (Savenye, 2004b). These can include live or online proctored or unproctored exams and quizzes, that for large classes may be computer-scored as well as instructor-scored. Assessment may also use portfolios and self-assessment questions. Rubrics may be used to score the online discussions or student moderation (as long as students have learned, had a chance to practice with, and received feedback using, the criteria you'll use to score them.) Rubrics that were useful for students in writing and doing peer reviews of papers can now be used for assessment.

The first time or two that you teach the course, conduct formative evaluation; that is, collect data to help you improve all aspects of the course (Savenye, 2004a). You might consider having students complete a short mid-semester course evaluation survey. We also typically include ongoing discussion boards in which students can provide feedback. Check student learning frequently, too, with an eye to improving the course as it goes along, or to give feedback, or correct flaws in the course before it's too late (Hanna et al., 2000).

### AT THE END OF THE COURSE AND BEYOND

At the end of the course, assess student learning. Also, use a survey to collect students' perceptions of their online learning experience. We also often include a discussion board on "lessons learned," and recommendations for improvement. While these data and the course experience are fresh in your mind, revise, or at least make notes about, the course for next time. You may also use the results of this course's formative evaluation to improve your other online (and hybrid and face-to-face courses.)

### CONCLUSION

What makes a great online teacher? Interaction is the key. Providing lots of informative feedback, engaging learners actively, keeping them motivated, helping them interact with each other, and supporting them to develop critical thinking skills and reflection are all elements of an effective online teacher (Kearsley & Blomeyer, 2004). Being self-motivated and skilled in human communication are two key characteristics, according to Lehmann (2004), who adds that using a sense of humor (gently), and being very positive, proactive, responsive, and responsible are all important. As Palloff and Pratt contend, online technologies allow us to build learning communities that transform learners (1999). In the end, we, too, are transformed by being part of the online learning experience.

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A SUCCESSFUL ONLINE COURSE IS A MIX OF GOOD CONTENT, GOOD PLANNING/ ORGANIZATION, AND GOOD INTERACTION ... PLANNING SHOWS ... THE BETTER THE PLANNING, THE MORE SUCCESSFUL THE IMPLEMENTATION.

WHAT MAKES A GREAT ONLINE TEACHER? INTERACTION IS THE KEY. PROVIDING LOTS OF INFORMATIVE FEEDBACK, ENGAGING LEARNERS ACTIVELY, KEEPING THEM MOTIVATED, HELPING THEM INTERACT WITH EACH OTHER, AND SUPPORTING THEM TO DEVELOP CRITICAL THINKING SKILLS AND REFLECTION ARE ALL ELEMENTS OF AN EFFECTIVE ONLINE TEACHER.

# Saving Lives with Teletrauma

## Vermont Trauma Surgeons Provide Consultative Services to Rural Communities Using State-of-the-Art Videoconferencing Technology

**Craig Lynar**

**P**atients in rural America suffering a severe trauma accident are twice as likely to die as trauma patients in urban areas. The availability of trauma training, longer discovery time, and greater distances to travel for treatment have all impacted death rates in rural trauma patients.

Because of this startling statistic, the University of Vermont (UVM)

College of Medicine and Fletcher Allen Health Care established a teletrauma network in 2000, which connects hospitals in the region to the level one trauma center at Fletcher Allen. Since its inception, the trauma staff has treated more than 60 patients through the teletrauma network. Participation has grown from three hospitals in 2000 to eight in Vermont and New York.

Dr. Bill Charash, director of surgical critical care and director of the teletrauma program, Dr. Michael Ricci, Allbee Professor of Surgery, chief, division of vascular surgery and clinical director of telemedicine, Michael Caputo, director of information systems and telemedicine operations at the UVM College of Medicine, and Dr. Fred Rodgers, chief division of trauma, burns & critical care, all note that the program has been well received by hospital staff and families of the patients in the region.

dedicated ISDN lines, which a testing team monitors. The monitoring team checks the lines twice daily during the work week to ensure first time connection to rural hospitals. The teletrauma network also leverages the hospital's existing 24-hour operator service. Remote sites call the operators on a toll-free number and request a teletrauma consult. The operator contacts the trauma doctor on call, who responds by connecting to the rural hospital via videoconference.

"We wanted a hardware unit rather than something PC-based," said Caputo. "Polycom's units easily mount on a ceiling or wall and provide the reliability and robustness we needed."

In hospitals, video units are mounted above patient beds on the wall to give a birds-eye-view of the room. Trauma doctors can then zoom in and out, gaining access to the entire room.



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### **BUILDING A TELETRAUMA NETWORK**

Fletcher Allen technical staff built the teletrauma program on three

### **TRAUMA UNIT SAVING LIVES**

The UVM College of Medicine has deployed a Polycom unit in eight

hospitals and seven physicians' homes. Five units around campus are dedicated to the teletrauma unit. Doctors can connect via videoconferencing to help elevate the quality of care and put trauma experts—vascular surgeons, neurosurgeons and pediatric surgeons—at the fingertips of rural hospitals. For instance, a patient was involved in a severe motor vehicle accident and suffered a closed-head injury with internal bleeding. Rural hospital doctors had experts from the Fletcher Allen trauma center walk them through a surgical airway procedure via videoconference. Videoconferencing has alleviated fears for rural doctors, as they know they have access to an expert in a moment's notice. "We provide guidance during trauma procedures and

help build confidence in the local doctors, bringing a higher level of care to the patients," said Charash.

## EXPANDING TELEMEDICINE

Throughout the system, hospital staff is expanding videoconferencing from its traditional role. Continuing education events incorporate the technology in grand rounds and other educational activities. On average, the UVM College of Medicine broadcasts 30 educational conferences and grand rounds a week. Uses are also expanding to administrative meetings for workgroups and projects within the hospitals. Clinical applications are active for consultations in dermatology, psychiatry and surgery. The teletrauma project repre-

sents an expansion of the telemedicine program into more high-stakes medical situations.

## ADVICE

For those looking to start similar teletrauma and telemedicine programs, the University of Vermont College of Medicine team recommends the following:

1. Have a clinical champion
2. Units need to be dedicated at each remote site
3. Have dedicated resources
4. Test your units and call center daily
5. Have a maintenance plan ready at all times

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# Distance Education's Role in University Disaster Planning

**Ryan Watkins**

For many of us, watching the recent television coverage of the devastating hurricanes along the Gulf Coast has once again shaken our perceptions of security and motivated us to review our personal emergency preparedness plans. From evacuation strategies to long-term access to financial resources, the plight of residents from the hurricane-stricken areas illustrated the potential weaknesses in many of our plans.



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Likewise, for colleges and universities the events that followed these natural disasters demonstrated the important role that disaster preparation must take in the strategic plans of institutions. Although hurricanes may not be a likely threat for all colleges and universities, from tornadoes and earthquakes to industrial accidents and terrorism, institutions must plan for a variety of emergency scenarios that could impact students, staff, and faculty.

Among the most visible examples of challenges faced by the colleges and universities along the Gulf Coast are those of Xavier, Loyola, and Tulane Universities, for which Hurricane Katrina came at a time when students were just returning to campus. But other institutions, including universities, colleges, and community colleges in Alabama, Mississippi, Louisiana, Texas, and Florida have also struggled to provide for the security of their students and employees, as well as maintain a continuity of services that will provide for the long-term financial stability of the institution.

Revenue from student tuition is the lifeblood of most any college, and for schools stricken by disasters the future often depends on

maintaining student enrollments and tuition payments. Fortunately, with today's technologies, no longer are colleges tied to campus facilities to offer learning opportunities to students who are displaced by emergencies or disasters. In meeting these demands, online courses and programs are commonly poised to provide essential services for institutions looking to maintain their continuity of services during and after disasters.

While effective emergency preparedness plans integrate a variety of pre-, during-, and postdisaster elements, there is an emerging role that distance education can play in the development of systemic disaster plans. Many distance education programs offer institutions valuable communications infrastructures that are accessible by students, faculty, and many staff members at most any location. Consequently, distance education resources can be utilized to provide stable and consistent learning platforms even when campus-based services are suspended. From a 3-day closer of a campus to the many months that are required to mend from a large-scale disaster, educational technologies are often flexible enough to assist institutions in



responding to various emergency scenarios.

Since many distance education programs operate on Web-based delivery systems (such as, Blackboard, WebCT, or eCollege) that are typically not maintained on-campus, their access and operational requirements are less likely to be impacted by the ravages of a disaster. This can provide institutions with a stable environment in which to provide students, faculty, and staff with essential two-way communication channels throughout a disaster and the subsequent recovery efforts. Even following large-scale disasters, access to the Internet has now become a mainstay of relief efforts provided by government and charity organizations.

In addition, the flexibility of distance education resources to provide meaningful learning opportunities to students who are located (or re-located) to most any location offers colleges and universities the opportunity to provide continuing services to students. As a result, with some preparation colleges and universities could be better able to maintain student enrollments and provide superb learning opportunities to students in most any academic field.

The following are suggestions for integrating distance education with institutional emergency preparedness planning:

## **OFFSITE TECHNOLOGY INFRASTRUCTURE**

The technology infrastructure that maintains the communications and e-learning applications of the institution should be housed in off-campus facilities that are not likely to be impacted by emergencies or disasters at primary campus locations. For example, George Washington University, which is located in downtown Washington DC, main-

tains its technology infrastructure in facilities located in suburban Virginia more than 25 miles from the main campus.

## **MIRRORED WEB INFRASTRUCTURE**

Online technology resources, including e-learning management systems, should utilize a mirrored infrastructure with multiple server locations. By having redundant servers in multiple geographic locations, the Web infrastructure that supports e-learning can offer a continuity of services even if regional emergencies interrupt services or decrease bandwidth availability.

## **BUSINESS CONTINUITY PLAN**

The integration of e-learning in the business continuity plans for the institution can ensure that students will continue to receive necessary services both during and after an emergency. From providing timely information on the emergency status of the campus to offering students the opportunity to continue their studies even if they are displaced, e-learning can help ensure that the institution continues its business even when parts of the main campus facilities are closed. Consequently, it is important for e-learning to be a component of contingency plans at the institution, college, department, program, and course levels.

## **ACCESS TO ALL USERS (STUDENTS, FACULTY, AND STAFF)**

All students, faculty, and staff should have access to the institution's e-learning infrastructure during and after an emergency. The

two-way communication channels that distance education infrastructures typically offer can provide necessary support and access to information, in addition to offering opportunities for the continuation of courses and other business services.

## **FACULTY READINESS TO MOVE TO ONLINE DELIVERY**

Preparing faculty to move specific activities from their courses (or complete courses) to an online format is essential in preparing for an institution to utilize e-learning during or after an emergency. While many faculty are already using e-learning technologies to support their on-campus courses, they can typically build on these experiences to create short-term and long-term strategies for hosting their courses in an e-learning environment. For faculty who have few experiences in utilizing technology to support their teaching, emergency readiness may offer an ideal platform to help introduce them to the technology and how it can be utilized to ensure that the core business of the college or university can be maintained throughout most any situation.

## **STUDENT READINESS FOR ONLINE COURSEWORK**

We should not assume that students have both the study skills and technical knowledge to effectively learn when courses are moved to an e-learning format. As a result, institutions should prepare students with the skills required for successful participation in e-learning courses. From accessing course materials to effectively communicating with faculty through online technologies, preparing students to be e-learners

can provide the foundation for successful disaster preparation.

Utilizing e-learning technologies should be an integrated element in the emergency and disaster planning for any educational institution. From utilizing technology to provide for the continuity of courses during (and after) a disaster to the dissemination of information to stu-

dents, faculty, and staff, e-learning technologies can facilitate the recovery of an institution from otherwise debilitating circumstances.

*Note:* Any opinion, findings, and conclusion or recommendations expressed in this material are those of the author and do not necessarily reflect the view of the National Science Foundation.



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## The Old Switcheroo

**Craig Ullman**

Educational technology companies and the administrators, IT pros, teachers, and students who use the products are used to the idea of the interactive application designed like a classroom. But what about the reverse: can a classroom be designed like an interactive application?

Interactive applications, whether Microsoft Word or Doom, succeed because people know why they use them, how they use them, and what their goals are. More than that, as the experience unfolds, users can choose their tools (e.g., "Page Down" or a really big gun) or view different passageways (e.g., "Print Preview" or a different pathway) to reach their goal. These

applications are intensely goal-driven: whether it's to write a column or survive the monsters, users always knows why they are there, if not always what exactly they are doing. Interactive applications are (perhaps unintentionally) near-perfect constructivist environments.

So how could this apply to a classroom? And how can you do it in a way that's even vaguely financially and technically possible? To fully answer that would require a very long discussion, but we can certainly start to create a model.

Imagine all the students have been given—by a posting on a Web page, by some writing on the chalkboard, and so forth—the goal of the class. For our purposes, let's pick something dry—diagramming a sentence. You have the teacher in the front of the room by the chalkboard doing his standard presentation, but mainly there to answer student questions. Let's also say there are four computers in the back of the room loaded with software that provides a gradually more complex series of assessments on diagramming a sentence. Let's also say that there are five iPods on the side of the room with a menu of video clips of a master teacher going through the different aspects of creating a sentence diagram (I just included that because it's a cool idea. Alternatively, you could have a couple of computers wired up to online tutors. Same concept.) For good measure, we have a table on

the other side of the room with a stack of workbooks open to the chapter on sentence diagrams.

All the chairs in the room are grouped around these work areas. The bell rings and the students walk into the room. They decide where they want to sit, and then they go at it, walking to whichever work area they think appropriate to learn the material. One would assume that most students would start with the teacher presentation, then eventually some of them would peel off to use another resource—perhaps because they are having trouble with the concept, or perhaps because they are not. At the end of the class, all the students are assessed—if they think they are ready. If a student does not think she is ready, she continues working on the subject and takes the assessment later.

So what would that give you? You would be chipping away at the control the teacher has over each student's attention. On the other hand, the students would be in charge of their learning, and be able to shape their experience by the paths they take. And appealing to different learning styles is built into the system.

I have seen, and I am sure you have seen, classrooms, usually in science, that have dabbled with a somewhat similar but more teacher-led structure. I'm just taking the metaphor to the logical extreme. Why not?



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# Another Year Ends as Another Year Begins

"USDLA serves the needs of the distance learning community by providing advocacy, information, networking and opportunity."

—USDLA Mission

**T**his past fiscal year, USDLA found itself continuing to positively grow in image, visibility, and national reputation. Concurrently, we also found ourselves facing the traditional challenges of budget, member services, and new initiatives. Throughout FY05, the USDLA Strategic Planning Process remained focused and all committees worked collectively on the implementation and fulfill-

ment of goals established by the board of directors. My gratitude goes out to the board members for their hard work and perseverance. At the end of every fiscal year, I ask myself "how has USDLA done?" What have been the success stories? Where could we have done better? How do we continue to improve the USDLA? Regarding success, I believe USDLA completed FY05 in an overall encouraging and performance results driven status. We have a strong team at the national office and I am confident that FY06 will yield positive results as we move forward. As always, the association's future growth and existence is dependent on sound business practice, membership services, and taking advantage of new opportunities. Toward that end, the following list of accomplishments for FY05 highlights the continued fulfillment of USDLA's goals.

- **Budget:** Completed year with positive cash flow with all expenses paid and up-to-date but increased long-term liability.
- **Digital Divide Fund:** Created Digital Divide Fund to solicit monetary support for K-12 distance learning network projects.

- **Membership:** Continued recruitment and maintenance of premium sponsorships, corporate sponsors, for-profit and non-profit organizations, and individual memberships.
- **Sate Chapters:** Continued progress on various new policies regarding membership, dues, legal, and partnership issues. Continued monthly audio conference calls with chapters. Steady development and increase with national leadership and support.
- **Board of Directors and Executive Committee:** Strong USDLA board leadership and commitment has resulted in quality services to members at all levels. Strategic planning, bylaw revision, and corporate contacts have steadily grown.
- **Partnerships:** Have created numerous partnerships for the association, which have increased benefits and level of membership services (e.g., journal, conference discounts, and networking opportunities).
- **Conferences:** USDLA-sponsored partnerships.



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July 25-29, 2004

NSU Fischler School of Education Global Leadership Conference, Orlando, Florida

September 13-September 15, 2004

The International Forum for Women in E-Learning (IFWE), Pointe South Mountain Resort, Phoenix, Arizona

October 11-14, 2004

VNU Training and Online Learning Conference, Moscone West Convention Center, San Francisco, CA

December 6-9, 2004,

2004 Education Industry Finance and Investment Summit, Washington, DC

February 28-March 2, 2005

VNU Training 2005 Conference & Expo, Ernest Morial Convention Center, New Orleans, LA

- Web site: Continued redesign of Website, with new service, commerce opportunities, and prod-

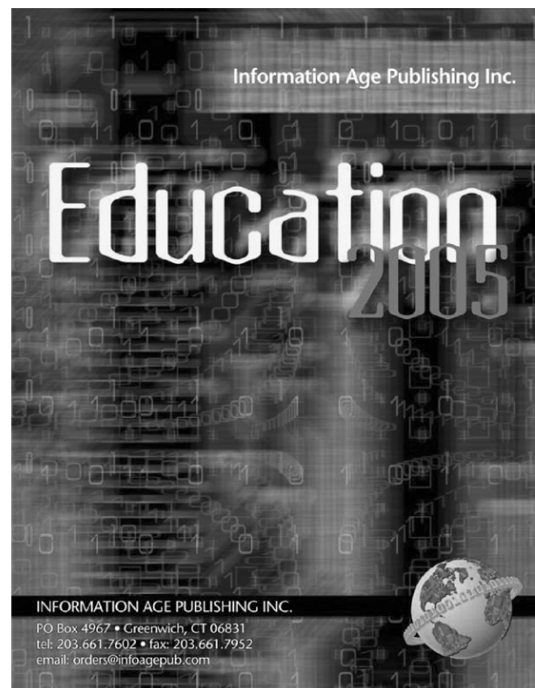
ucts provided by sponsors of the association.

- Policy Issues: Continued work with USDLA Board to increase influence on distance learning initiatives sponsored by the federal government.
- Strategic Planning Committee: Involved in all aspects of goals with subcommittee chairs:
  - Awards
  - Bylaws
  - Chapters
  - Conferences
  - Distance Learning Accreditation Bureau
  - Membership
  - Publications
  - Public Awareness
  - Public Policy
  - Sponsorship/Revenue
  - Strategic Alliance

In summary, fiscal year 2005 has been a year of major challenge and accomplishment. USDLA finished the year on schedule and on task with enthusiasm and excitement. As we begin our 19th year, our man-

agement, member services, and steady direction will serve us well as we move forward into fiscal year 2006. Our mission will remain focused in the support for development and application of distance learning using various technologies, delivery methods, and application. Our goals will remain targeted by providing national leadership in the field of distance learning, advocating and promoting the use of distance learning, providing current information on distance learning, representing the distance learning community before government policy and regulatory bodies, and serving and supporting the state, consortium, and individual organizations that belong to USDLA. Finally, USDLA will continue to pursue a global leadership role through liaisons with international organizations, promote equality and access to life-long learning through distance learning, and promote diversity among our organization and its programs.

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# USDLA Highlights of 2005

**Deborah Harrison**

**A**s we come to the close of 2005, I would like to express my appreciation to the board of directors, the USDLA National Office, and membership for their confidence in me and support of my presidency. It's been a fulfilling year and I'd like to share with our readership some of the highlights.

## CONFERENCES

USDLA held its spring and fall conferences in conjunction with VNU Learning's Training Conference & Expo. Both conferences highlighted

numerous USDLA sessions as well as a USDLA Pavilion that featured the latest innovations in distance learning technologies.

## BOARD MEETINGS AND STRATEGIC PLANNING

Each year, the board conducts its meetings in the spring, summer, and fall. This year, the meetings were held in New Orleans, Santa Fe, and Long Beach. The summer board meeting was combined with a strategic planning work session under the leadership of President-elect Paul Roitman Bardack.

Teaching Awards. Visit [www.usdla.org](http://www.usdla.org) for a complete roster of award winners.

## STATE CHAPTERS

Executive Vice President Bill Jackson led the state chapter presidents in regular meetings. To help share programs between state chapters, a new "tool kit" was posted on the USDLA Web site. In addition, the USDLA Awards program included a competitive state chapter award. This year's winner is the Alliance for Distance Education in California.



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## AWARDS

Chaired by Don Lake, the USDLA Awards program was revamped and refreshed this year. As a result, USDLA received more submissions than in any other previous year. Award winners were honored at the awards ceremony in Long Beach, California. This year's awards highlighted the deployment of various distance learning technologies and include online, satellite, and video-conferencing components. Included for the first time this year was a 21st Century Best Practice Award, as well as the Best Practice Awards for Distance Learning Programming and Excellence in Distance Learning

## NEW LEADERSHIP

The board of directors welcomed new board members in June: Russ Colbert, Global education market director for Polycom; Mary Beth Susman, director of education for Rocky Mountain PBS; and Kris Phelps of Iowa State University.

Don Olcott, Jr., of Western Oregon University, was elected to serve as our president-elect and will become USDLA president in October 2006.

Paul Roitman Bardack assumed the USDLA presidency at our October board meeting. We look forward to his leadership!

## THE BEST IS YET TO COME ...

Recognizing the role of women leaders in our profession, USDLA will host the second annual International Forum for Women in E-learning, which will be held March 27-29 in Galveston, Texas. Darcy Hardy and the IFWE committee are plan-

ning the program and will have additional information posted on [www.usdla.org](http://www.usdla.org).

A USDLA sponsored Distance Learning National Policy Forum is being planned for 2006. Under the direction of board member Reggie Smith and the Public Policy Committee, the logistics and program planning is underway. Additional

information will be posted on [www.usdla.org](http://www.usdla.org).

We are all looking forward to an outstanding 2006 for the United States Distance Learning Association. We hope you join us! Sign up for your membership at [www.usdla.org](http://www.usdla.org).

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# Focus on Learning

**Paul Roitman Bardack**

I find myself a bit more introspective this time of year than usual, and I would like to share some of my thoughts with you.

I have just been inaugurated president of the United States Distance Learning Association. What an honor! This is the finest e-learning trade group in the nation, perhaps in the world. We provide networking opportunities for our members so that they may share best practices with one another; we honor excellence in distance learning within the public, private, and academic sectors; and we serve as Federal and state advocates for

smarter e-learning public policy. I am humbled by my selection. If you have not yet joined the USDLA, I urge you to do so.

I am also humbled for other reasons. In my Jewish faith this period is the beginning of the New Year and these are the Days of Awe, the holiest days of the year. This is a time to reflect on all aspects of one's life—professional as well as personal—in order to seek areas in need of improvement.

So as I take over the USDLA presidency, I find myself reflecting not only about the organization I have been chosen to lead but also, more generally, about the profession it represents. And I have an overriding concern which I wish to share with you.

Look how we define ourselves. We do not engage learners, we engage “e-learners.” We are not educators; we are “distance” educators. Nor are we content to focus on the eradication of distance barriers between those who teach and those who are taught: we eradicate time barriers as well when we seek to provide “anytime/anyplace” instruction.

And so we go about our business, multitasking merrily along, linked always to one another through our wireless e-mail, our ever-present cell phone, our ubiquitous handheld devices. When we gather informally, our discussions are just as

likely to be about the latest, thinnest, lightest device we just purchased, and how it permits us never to be out of touch, as our discussions are likely to be about lives we have touched in the classroom. Strike that: my experience is that our discussions are more likely to be about our ever-improved technological abilities to surmount distance and time than they are to be about touching the lives of those we educate.

That is a shame. I am far from being a Luddite. After all, I am CEO of a well-known Web site, I wrote this article initially on a state-of-the-art laptop while traveling on the Washington, DC Metro, and I edited it subsequently on one of my three home computers; I often communicate with others via webcam; and my two cell phones and iPAQ are always nearby. Still, lately I have been thinking that I and others in my profession have been missing a fundamental truth: distance and time are not always the enemies of education; sometimes they are the prerequisite to our deeper understandings. And technologies which overcome distance and time, thereby keeping the purported learner always in touch—always bombarded with the actual or potential receipt of new information—may instead distract the learner rather than more fully engaging him or her.



Paul Roitman Bardack, CEO, MyJewishLearning.com, and President, United States Distance Learning Association. E-mail: [prbardack@myjewishlearning.com](mailto:prbardack@myjewishlearning.com)



I noticed something recently. Because during the normal workday I am always checking my e-mail, always on my telephone or cell phone, or always on my webcam, I have unintentionally extended my workday to include times and places when and where I cannot be in touch with my staff or other company stakeholders. Do I have to write a monthly report to my funders, providing them insights into my recent management decisions? You can bet that will be written at 5 a.m. (before I check a single work-related e-mail). Is there a seemingly insoluble budget problem I need to address right away? You can bet that the answer will come to me midway through my nightly 5K run (sans cell phone).

In other words, much of my best thinking about my daily distance learning work comes when I have created distance and time barriers between myself and others. And I think the same thing holds true in the world of education.

There is typically a gap in time between the receipt of information and the ability of a student to

understand that information and to place it within a larger context. Sometimes, that gap is measured in seconds, or less. Other times, when there is greater complexity, that gap may last minutes, hours, days, or even longer.

True, for some people the more distractions during the gap, the better: we all know stories of the math student who solved a particularly difficult quadratic equation while studying a physics text.

But for many of us, the fewer distractions during that gap, the better. Meetings, telephone calls, e-mails, and the like only get in the way. To be sure, we cannot stop life while waiting to understand the latest academic insight regarding nineteenth century Eastern European history, nor is it realistic to expect all intrusions to cease while we master Spanish verb conjugations. But we can do a better job, I believe, in controlling when and where the intrusions take place. And technologies that keep us "plugged in" at all times and places are just as likely to cause learning problems as to solve them.

Technology's ability to diminish the importance educationally of time and place is, simultaneously, sometimes a help and sometimes a hindrance to the nurturing of insight within those attempting to learn. Yet, how often do we in our distance learning profession define ourselves by our technologies, rather than by our pedagogies? All too often, in my experience.

Our task, it seems to me, is to provide balance: to know when to bring technology to a learning situation and when to remove it from a learning situation. For, ultimately, we are not "distance educators" attempting to engage "e-learners"; we are teachers engaging students as other teachers have attempted to engage other students for thousands of years previous to us. Our focus therefore should not be upon the science of new technologies; instead, it more properly should be upon the art of assuring that learning is actually taking place.

And, to do that, we must focus more on becoming better educators than becoming better "distance educators."

**OUR TASK ... IS TO PROVIDE BALANCE: TO KNOW WHEN TO BRING TECHNOLOGY TO A LEARNING SITUATION ...**

**AND, TO DO THAT, WE MUST FOCUS MORE ON BECOMING BETTER EDUCATORS THAN BECOMING BETTER "DISTANCE EDUCATORS."**

# USDLA Chapters Strive for Excellence

**Kris Phelps**

**T**he State Chapters of USDLA strive to bring their members excellence through access to conferences and professional continuing education, newsletters, Web casts, and networking.

In October of 2005, USDLA awarded the first Outstanding State Chapter award. The award was created to acknowledge the USDLA Chapter that best exemplifies the association's high standards in the field of distance learning.

USDLA was pleased to present this first Outstanding State Chapter Award to the California state chap-

ter, the Alliance for Distance Education in California (ADEC). The award committee gave ADEC high marks for training, collaboration, communication, and leadership.

ADEC, established in 1989, is an association of more than 300 professionals dedicated to the ongoing development of distance learning and educational technology. ADEC is the only California-based organization that emphasizes cooperation between all segments of education: kindergarten through university, lifelong learning, business training, and government agencies. ADEC's activities are focused on promoting effective partnerships/collaborations among all levels of education, training, and providing leadership in the education policy. The membership is comprised of individuals who identify as decision makers or those who can effect change with an organization.

ADEC members cite the organization's commitment to fostering intersegmental cooperation between educational institutions and various communities among the benefits of affiliating with the group. Distinguished representatives from K-12 districts, county offices of education, colleges/universities, and the California legislature work to provide the information needed to bring initiatives vital

to the state's current and future efforts in guaranteeing access to high-quality educational services to the citizens of California.

ADEC's success may be best measured from the details of how its annual Strategic Planning Conference provides its board of directors with the opportunity to evaluate input from members and other stakeholders. They are able to make the most appropriate adjustments to everything from how the Board is structured, to reviewing education policy at the federal, state, and local level, to scheduling events and activities throughout the calendar year that leaders throughout the state can use at their work site the next day.

ADEC has become a dynamic organization that prepares members to respond to the changing needs of the economic, social, and political climate. It has truly enhanced the value of its brand, as evidenced by its dedication to "connecting leaders with solutions."

While considering the award nominations, it was clear to the awards committee that the State and regional chapters across the United States truly exemplify the association's high standards in the areas of training, collaboration, communication, leadership, and recognition of excellence.



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# USDLA Announces 2005 Award Winners

The United States Distance Learning Association (USDLA) presented its 2005 Distance Learning Awards at a ceremony held on October 17, 2005 in conjunction with the Fall Training and Online Learning Conference and Expo in Long Beach, CA, the premier conference and expo for USDLA and the distance learning industry.

The annual USDLA awards program acknowledges major accomplishments in distance learning and highlights those instructors, programs, and distance learning professionals who have distinguished themselves in the field. This year's competition included a new award category, the 21st Century Best Practices Award for Distance Learning. That award recognizes extraordinary achievement in distance learning.

While the USDLA awards have been closely followed by the industry for a number of years, the 2005 competition marks a new format for the awards. "The USDLA awards have become the standard of excellence for recognizing achievement in distance learning," said John Flores, CEO of USDLA. "This year we received numerous entries. That made this an especially intense competition—these winners are truly superb."

For the 2005 Awards program, USDLA focused on three major areas that exemplify the dynamic nature of distance learning. Awards were submitted for Online Distance Learning, Video Conferencing and Satellite Distance Learning.

The USDLA distance learning awards were presented to professionals and organizations for Excellence in Distance Learning Programming and Excellence in Distance Learning Teaching.

Excellence in Distance Learning Programming recognizes organizations that have designed and delivered an outstanding, comprehensive distance learning service. Recipients have regional, multi-state, and international programs, including courses from diverse disciplines.

Excellence in Distance Learning Teaching recognizes an outstanding individual who has creatively utilized the medium to inspire learning in a given subject. The recipients have all taught a course, series, or unit in a distance-learning format with an imaginative approach to the material, well-designed visuals, and a demonstrated rapport with the participants.

Don Lake, longtime USDLA board member and chair of the awards committee, noted that, "This year's award winners represent many of the most innovative leaders in the field of distance learning." He continued, "The USDLA awards program honors out-

standing contributions from across the spectrum of distance learning—from satellite and videoconferencing to online distance learning programs. These are the best of the best."

## Online PreK-12 EXCELLENCE IN PROGRAMMING

Platinum  
Harvard Graduate School of Education  
Wide-scale Interactive Development for Educators (WIDE)  
Professional development program

Gold  
Colonial Williamsburg  
Electronic field trips

Gold  
Virtual High School, Maynard, MA  
"Poetry writing" by Elizabeth Sanchez

Bronze  
WV Department of Education  
West Virginia Virtual Schools  
Spanish 1A & 1B

## EXCELLENCE IN TEACHING

Gold  
Nathan Putney  
Florida Virtual School  
AP Calculus

Bronze  
Daryl Diamond  
Broward County (FL) Public Schools  
Professional development

## Online Higher Education EXCELLENCE IN PROGRAMMING

Platinum  
City College of San Francisco  
"Ownership/operation of a small business online"

Gold  
University of Southern California  
"Geo 260—Natural hazards, basic principles"

Gold  
City College of San Francisco  
"Digital media skills"

Silver  
University of Southern California  
Edu522—History and types of accountability

Silver  
University of North Carolina at Greensboro  
Master of Arts in Liberal Studies, Online degree

Bronze  
Boston University  
Food stuff: A taste of biology

Bronze  
Connect for Education  
OnMusic fundamentals

## EXCELLENCE IN TEACHING

Platinum  
Dr. Linda Ross-Happy  
University of Missouri

Gold  
Dr. David Levy  
Bellevue University

## Online Corporate/Business EXCELLENCE IN PROGRAMMING

Platinum  
Engenio Information Technologies, Inc  
Engenio2882 with SANtricity9: Installation and configuration

Gold  
General Electric Advanced Materials and GECIS  
New hire orientation

Silver  
General Electric Advanced Materials and GECIS  
Polymer science

Bronze  
Toshiba America Business Solutions, Inc.  
Dimension 1 program

Bronze  
TRC Interactive, Inc  
Teller solution

## Online Government/Military EXCELLENCE IN PROGRAMMING

Gold  
Defense Acquisition University  
Continuous learning team

## EXCELLENCE IN TEACHING

Silver  
David C. Bachman  
Defense Acquisition University

## Online Telehealth EXCELLENCE IN TEACHING

Gold  
Dr. Eric A. Brody  
EKG Jeopardy

## EXCELLENCE IN PROGRAMMING

Platinum  
Global Nomads Group  
New York, NY

Gold  
Missouri School Boards' Association  
2005 Board candidate videoconference

**Videoconference PreK-12  
EXCELLENCE IN TEACHING**

Platinum  
Jody Howard Kennedy  
Eastview Middle School, White Plains, NY  
Satellite PreK-12

**EXCELLENCE IN PROGRAMMING**

Gold  
BJ HomeSat Network  
3rd Grade English

**Satellite Higher Education  
EXCELLENCE IN PROGRAMMING**

Gold  
University of Albany—School of Public Health  
Genomics and public health

**Satellite PreK-12  
EXCELLENCE IN TEACHING**

Gold  
Mrs. Jennifer Cox  
BJ HomeSat Network

The USDLA Board also recognized the leadership of trend-setting and innovative corporations and non-profit agencies with its new 21st Century Best Practices Award for Distance Learning. This is the highest award bestowed upon an organization in our industry.

The new 21st Century Best Practices Award for Distance Learning recognizes an organization which demonstrates extraordinary achievement through distance learning. The recipients have distinguished themselves in areas that include research and writing as well as leadership activities in regional, national, or international forums. They have been active in melding education and training technologies to enhance the learning experience of those at a distance. These recipients are singled out for their positive impact on the distance learning industry.

Flores noted that distance learning technology frequently opens new frontiers of learning. "The recipients of the 21st Century Award have often been the pioneers, not only for distance learning, but for education and training in general. This award speaks of innovation and it speaks of excellence. These are the people and organizations that have done the heavy-lifting to make all of this happen."

**Government/Military**

DoD/Defense Acquisition University  
Blended technology  
The DAU performance learning model  
  
DoD / TRICARE Privacy Office  
Online technology  
HIPAA training program

**PreK-12**

Florida Virtual School  
Online technology  
Education and professional development programs  
  
Virtual High School, Massachusetts  
Online technology  
Education and professional development programs  
  
Center for Interactive Learning and Collaboration  
Videoconferencing technology  
Education programs

**Higher Education**

The LeCroy Center for Educational Telecommunications  
Blended technology  
  
Stevens Institute of Technology  
Online technology  
Webcampus.stevens  
  
The University of Massachusetts  
Online technology  
UMassOnline—Program aggregation

Stanford University Center for Professional Development  
Online technology  
Stanford Online—Emerging technology  
  
University of Maryland  
Online technology  
Inter-institutions

**Corporate/Business**

Polycom, Inc.  
Blended technology  
Collaborative communications  
  
Reynolds University  
Blended technology  
Corporate university training  
  
The Rendon Group  
Videoconferencing technology  
Empower peace

**SPECIAL RECOGNITION**

USDLA Outstanding State Chapter. This year, for the first time, USDLA recognized its most outstanding affiliate chapter. The USDLA California chapter—the Alliance for Distance Education in California—earned that recognition

USDLA Hall of Fame. Robert A. Wisher, associate director of Training Transformation Technologies and director of the Advanced Distributed Learning (ADL) initiative for the Office of the Secretary of Defense was selected by the USDLA board of directors for elevation to the USDLA Hall of Fame.

USDLA 2005 Eagle Award. The Eagle Award is presented by USDLA to a nationally recognized public official that has demonstrated unique leadership in distance learning. This year USDLA recognizes Florida governor John Ellis "Jeb" Bush for his commitment to providing greater educational opportunities in his state by means of distance learning technology and especially his support of Florida Virtual School.



# Is the World Flat?

**Michael Simonson**

**T**homas Friedman's book, *The World is Flat: A Brief History of the Twenty-first Century* (2005), is a must read for distance educators. Futurists are a funny group. The good ones write books that present very simple ideas, but ideas that capture the imagination. Actually, futurists' ideas are often already known, but no one else had the savvy to come up with the neat phrase or analogy that makes the idea real and easy to remember. Friedman found the neat phrase. *The world is flat* is cer-

tainly a phrase that captures the reader's attention and, after careful thought, actually has a certain degree of accuracy.

Basically, Friedman is implying, among other things, that because of the exponential growth of telecommunications technologies, the world is becoming a place where talent and skills can be tapped no matter where they are found. Friedman even proposes in his book a "coefficient of flatness":

the notion that the flatter one's country is—that is, the fewer natural resources it has—the better off it will be in a flat world. The ideal country in a flat world is the one with no natural resources, because countries with no natural resources tend to dig inside themselves. They try to tap the energy, entrepreneurship, creativity, and intelligence of their own people—men and women—rather than drill an oil well. (Friedman, 2005, p. 262)

Certainly there is more to Friedman's book than the coefficient. The book is thought provoking on a number of levels. However, it is the book's implications for distance education that grabbed my interest. Education—teaching and learning—is no longer place

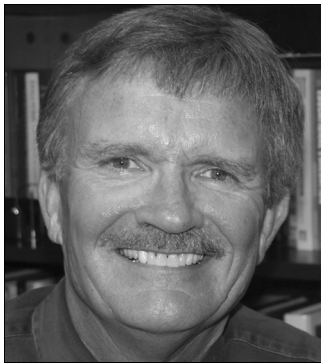
bound, as we know. Expertise can increasingly be tapped from anywhere. Students can become learners from almost anywhere. Distance educators have been preaching this concept for years.

What about flatness? In education, the natural resource is the physical facility—the building. The massive investments in facilities may make countries less nimble, less agile—and less flat. The countries that are flatter, that have a smaller investment in the "industry of education," may have an advantage as they develop the educational system of the twenty-first century—the educational system based on people and telecommunications rather than buildings and grounds. It certainly is something to think about!

**And finally**, thanks to Les Moller and his associates for their efforts putting together this issue of *Distance Learning*.

## REFERENCE

Friedman, T. (2005). *The world is flat: A brief history of the twenty-first century*. New York: Farrar, Straus, and Giroux.



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