DISTANCE LEARNING

... For Educators, Trainers, and Leaders

In this issue the spotlight is on

Walden University

DISTANCE LEARNING

PURPOSE
Distance Learning, an official publication of the United States Distance Learning Association (USDLA), is sponsored by the USDLA, by the Fischler School of Education and Human Services at Nova Southeastern University, and by Information Age Publishing. Distance Learning is published four times a year for leaders, practitioners, and decision makers in the fields of distance learning, e-learning, telecommunications, and related areas. It is a professional magazine with information for those who provide instruction to all types of learners, of all ages, using telecommunications technologies of all types. Articles are written by practitioners for practitioners with the intent of providing usable information and ideas for readers. Articles are accepted from authors with interesting and important information about the effective practice of distance teaching and learning.

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MANUSCRIPT PREPARATION GUIDELINES

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 journal with applicable information for those involved in providing instruction of all kinds to learners of all ages using telecommunications technologies. Articles 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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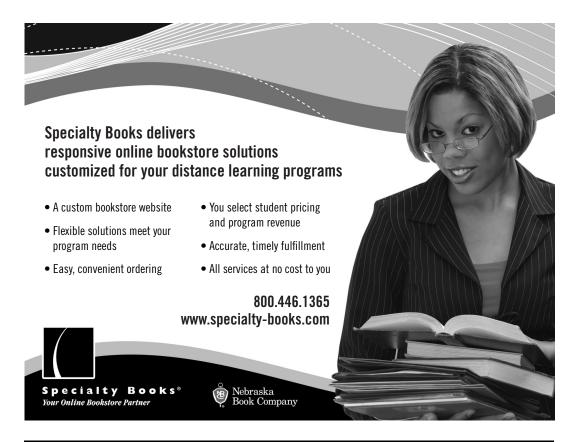
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IN UPCOMING ISSUES

A Walk Around Walden Pond

Reflections on the Educational Technology PhD Specialization, Walden University

MaryFriend Shepard

Preparing educational technologists for professional positions in the twenty-first century requires a reevaluation of the way learners are engaged in the process of education in a digital age. At Walden University, the educational technology PhD specialization provides cutting-edge e-learning in a fully online program of studies for adult learn-

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ers. The newly redesigned program integrates technologies learners are using outside of the classroom into their learning experiences inside the classroom. Not only is the delivery of content accomplished digitally, learners demonstrate their learning through digital projects.

Like most online universities, Walden provides all the benefits of distance education including *anytime-anywhere* learning for diverse, adult learners around the globe. What makes Walden unique is our mission of social change. Lisa Rodriguez, a PhD student in educational technology, wrote, "one can feel a current of commitment to making this world a better place running through Walden's curriculum, residencies, publications, and conferences. Social change is not just a phrase used as a slogan, but a guiding force for Walden's students and faculty." Our goal is that our graduates transform and change the social conditions in their part of the world.

Imagine Henry David Thoreau (1995) walking around Walden Pond over 150 years ago, observing nature and finding valuable lessons of social change in his surroundings. The founders of Walden University began our university 38 years ago so learners could share their vision for effecting positive social change inspired by the life of Thoreau. This remains the mis-

sion of our university, and is reflected in the educational technology specialization.

The Richard W. Riley College of Education and Leadership is the home of 10 PhD specializations, three EdD programs, 13 master's programs, and a postbaccalaureate teacher education program with an master of arts in teaching option. All are fully accredited, online distance education programs. A constant challenge for Walden has been its phenomenal growth. *U.S. News and World Report* ranked Walden as the largest online graduate university for educators. Since its inception, over 28,000 educators have completed masters' and doctoral programs. Distance education and educational technology programs today require continual and ongoing updating to reflect the technological revolution in society.

THE COMMITMENT: COLLABORATION

Online learners may not naturally know how to connect with each other or with faculty when they begin an online program. Isolation and fear may result, preventing learners from gleaning the best from their doctoral programs. We believe that helping to build online communities where students engage not only with faculty, but with each other, is essential to success.

Our commitment is to provide a rich blend of content and technology in a collaborative environment. Faculty and learners struggle together as we reflect about solutions to authentic problems in class discussions that facilitate the development of scholar-practitioners. Our graduates become technological leaders and decision makers in education, business, or the corporate world because they have used emerging tools in their education that they may propose for adoption in their industries.

Strong faculty-student interactions, along with engaging student-to-student connections, permeate the classroom envi-

ronment. The technological tools learners use with their friends and family are brought into classroom learning experiences. Collaboration using wikis, Google docs, and social networking tools are a regular part of our classes. Communication is enhanced beyond the classroom discussions and chats in eCollege, through the use of technologies like blogs, Skype, and Twitter, as deliberations evolve beyond the class content. Connecting with a network of learners is the norm, and something our students take from their doctoral experience.

Marvin Fuller, a PhD student in educational technology, stated "Walden is the only on-line university I've attended. I thought I would be less connected to students and faculty than in my previous graduate degrees but that is not the experience I've had. I feel more connected to my classmates as we interact on a deeper level. I feel the level of interaction also encourages the instructors to become more involved in each of our ideas."

Collaborative projects are included in most of our nine educational technology courses. For students to build learning communities, they must share ideas and reflect on the contributions of others. As they build projects, they learn to be members of a team in which their ideas are valued and integrated into a larger product.

Our goal is that student projects are uniquely stronger because of the collaborative process than they could have been had individual students developed them on their own. Learners are taught the skills of collaboration and the responsibilities of group membership to maximize success. Rose Arnell reflected that "what makes Walden's program different is that despite the fact that its cohorts are hundreds of miles apart, the level of discussion and feedback we receive from each other makes the learning real."

In face-to-face programs, doctoral students often complain about group projects because of the time constraints in their

lives—balancing work, family, and school. Because they save specific time for classes, having to set aside other meeting times for physical meetings with classmates can be difficult. Given these constraints, projects are often a cooperative product of dividing the task into smaller parts, and then simply putting them together.

This is less a problem in online courses, because students are familiar with and are already using the technological tools necessary for successful collaboration. One of the strengths of e-learning is the tools that allow students to collaborate *anywhere-anytime*. Using asynchronous tools like wikis, students can share and edit ideas, maintaining a record of their interactions. They share and edit work products from the convenience of their homes. Using synchronous online tools, learners view documents and discuss their work as needed. With easy-to-use, open source tools, students collaborate across time zones and from any location to develop projects that require teamwork.

THE COMMITMENT: SCHOLARSHIP

A rigorous curriculum based on research and theory is foundational in our program, however we go further. Our graduates are "scholar-practitioners." We expect them to effect positive social change and make a difference in their world during their program, and afterward. This happens because they are asked to reflect and analyze authentic problems in all aspects of their program of studies. Lisa Rodriguez said it best. "Walden students are expected not only to gain knowledge and skills, but to contribute knowledge to their fields and to apply what they learn in authentic ways. This makes Walden's program more relevant and meaningful to students than programs that focus on theory without balancing it with practice." The application of knowledge based on research and theory grounds our students, and prepares them for life after the PhD.

Our commitment is to help learners think like researchers and scholars with the ability to apply theory and research to authentic situations. The outcomes of our program are a careful blend of the National Council for Accreditation of Teacher Education (2008) technology standards from the Association for Educational Communications and Technology (AECT), and the critical components of our mission, including teaching and life-long learning, research and reflective analytical thought, leadership and communication, diversity, and collaborative social change.

The motto of Walden, "A Higher Degree, A Higher Purpose," centers our faculty and students on social change. We expect our graduates to be leaders, problem solvers, and decision makers in technology so they can guide their organizations into the next wave of technological innovations. We expect them to make a difference. Many work full time and are able to apply learning to their workplace immediately. LaMar Brown, a PhD student in educational technology, stated, "The structure of Walden University allows professionals to further educate themselves without interrupting their lives and daily routines. The professors are caring and passionate about helping to produce social practitioners of the future."

THE COMMITMENT: THE FUTURE

In many PhD programs, learners become experts in one aspect of their field, becoming more specialized as they move through their program. In areas like history or British literature, this might not be a problem, since the fields of history and literature may not make dramatic changes during a 3-year period of time. In educational technology, this could be disastrous, since educational technology has both a content and skill component.

Learners find quickly that PhD work differs from that of their master's programs. The emphasis on theory and

research requires a new mental discipline and exploration. Without a systematic determination to engage learners in emerging and future technologies, it would be easy for technological skills to wane as students focus on theory and research. Karl Fisch, in his video *Did You Know* (2008), profoundly stated the dilemma of our field: "We are currently preparing students for jobs that don't yet exist, using technologies that haven't been invented yet, in order to solve problems we don't even know are problems yet."

Because of this, we are committed to engaging learners in the use of technological tools as they explore course content. We are also committed to requiring learners to demonstrate their learning using technology, along with scholarly papers. Learners blend the content of educational technology, social change, and technology with emerging and future technologies throughout their program. They create timelines, vodcasts, podcasts, interactive PowerPoints, among others, to demonstrate learning.

Designing relevant courses is the challenge of our course designers and content experts so learners receive the most up-to-date program we are able to deliver. Walden University is a member of the Laureate International University network (Laureate Education, Inc.), where there is a strong commitment to this vision. In each of our technology courses, streaming media, including videos, are included that can be viewed online or downloaded for later use. Written course materials are also digitally provided so students can download the podcasts using iTunes to listen at convenient times and locations. This cutting-edge delivery of content using multiple formats helps learners engage in the course content using their preferred learning styles. The use of e-books and online resources are included as much as possible.

Using Skype, educational technology students were asked what they considered to be the most attractive aspects of the Walden program. The quotes included in this paper were gleaned from the postings over a 2-hour period of time. Rose Arnell referenced

> Walden's dedication to crafting the tool to meet the specific needs of its learners.… Walden's specialty is surveying for suggestions and then implementing changes based on best practices. I have only been in the program a little over 2 years but have found each year to be better than the one before. Certainly, there are minor things I would change, but there are many more things I am impressed with when it comes to educating thousands of adult learners from different continents, socio-economic brackets, walks of life, and motivations for learning.

PROGRAM OF STUDY

When students complete a PhD in educational technology from Walden University, they are ready to advance their professional career as a change agent and put into action their educational experiences. Graduates pursue careers in many areas of instructional technology, including becoming corporate trainers, K-12 technologists, faculty in higher education, and educational consultants. Five key program components help us meet our commitment to our students: technology courses, research courses, knowledge area modules, residencies, and the dissertation. If you are interested in more information on these elements than is provided below, you will find more detail online at www.waldenu.edu/Schools/Schools_5994.htm

Knowledge area modules (KAMs) are the hallmark of all Walden PhD specializations and provide a distinctive and unique approach to doctoral study. These innovative KAMs prepare students as scholar practitioners and for the dissertation process in a unique manner. Our students write three KAMs while they are taking their technology and research courses.

Each KAM has a particular theme related to the specific specialization: KAM 1 Social Change, KAM 2 Human Development, and KAM 3 Organizational and Social Systems. Three parts make up each KAM: Breadth, Depth, and Application. In the Breadth, students critically analyze several theories related to the topic of the KAM; in the Depth, students read current research on a theme, and write a review of research identifying gaps in the field. The culmination of each KAM is an Application project in which they identify an authentic problem with a technological solution in the workplace. Students translate theory and research into practice as they experience social change in person.

After the first quarter in our program, learners are given a faculty mentor who works closely with them throughout their program, directing two of the KAMs, interacting in a mentor course each quarter, and often chairing the dissertation. One of the most thrilling experiences for a faculty member is to hood students at graduation after working with them from the beginning of their program. As Rose Arnell noted, "The value of having someone vested in your success makes the program feel personalized." The mentor-mentee relationship is one of the central elements that gives our program such a positive student-centered focus.

Nine courses provide variety in content and technological integration throughout the program. The evolution of education technology provides a historical and theoretical framework for the program. Courses developing leadership skills include diffusion of technological innovation, leading and managing technology, and learning theory. Courses oriented toward instructional design include two courses on distance education, multimedia, and emerging and future technologies. A final course explores current issues in educational research and prepares students for their dissertations.

This program is highly focused on research, with a traditional dissertation being the capstone experience for all. Throughout the program, students take four research courses in research methodology and design, along with quantitative and qualitative research. Students are given online tools and rubrics to assist them throughout the dissertation process, along with access to our writing center and online resources through our library. To ensure that our students are being mentored well, faculty participate in a dissertation training course to become familiar with the Walden approach to dissertation research prior to serving on or chairing committees.

Four face-to-face residencies for a total of 20 days are required of all students, with one residency a year being the preferred mode. Residencies are organized around milestones in the program, with intensive workshops to assist students through their present phase. For example, the first milestone focuses on the KAM process, while the second and third milestones focus on dissertation research. The final milestone focuses on professionalism following the completion of the PhD. Students indicate that the face-to-face mentoring with faculty members, and their collaboration and socialization with peers is refreshing. Residencies serve as a time of connecting and extending personal networks beyond the classroom.

FUTURE OF EDUCATIONAL TECHNOLOGY AT WALDEN

Our students inspire us to greater heights at Walden. They are a forward-thinking group of leaders who bring remarkable diversity to the learning process. Coming from diverse cultures, ages, genders, experiences, and with diverse technological abilities, learning is always moving to higher levels. They inspire and learn from each other with their insightful reflections and questions, and raise the
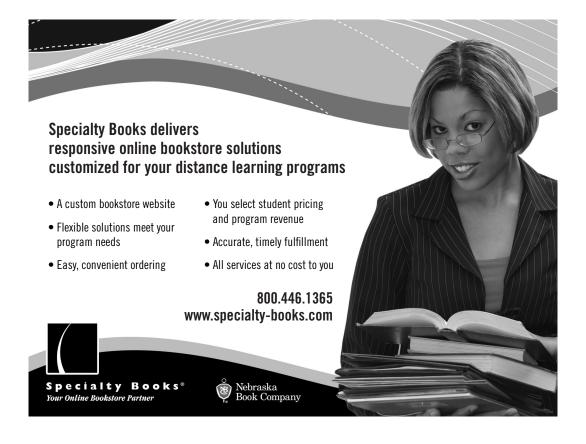
level of scholarship for all. At Walden, the global community is a reality.

REFERENCES

National Council for Accreditation of Teacher Education, Program Standards and Report Forms. (2000). Retreived October 1, 2008, from http://www.ncate.org/public/program-Standards.asp?ch=4

Fisch, K. (2008). *Did you know? Shift happens*. Retrieved October 1, 2008, from http://www.youtube.com/watch?v=ljbI-363A2Q

Thoreau, H. D. (1995). *Walden: Or life in the woods*. New York: Dover.

Social Workers and Distance Learning
How We Put the Social Back into Distance

Lisa Abate

This is a story of how distance learning technology and a little good old-fashioned instructional design brought personalized training to Child Protective Services' caseworkers across Texas while saving the state hundreds of thousands of dollars.

Child protective services (CPS) is the type of profession that draws from people who want to make a change in the world. Caseworkers are willing to go out every day, often putting themselves in dangerous situations, in order to provide for the safety of other people's families. In Texas, a state with some of the largest expanses of rural areas as well as some of the largest urban areas in the nation, caseworkers spend much of their day traveling from one location to another. In the training department we are tasked with finding ways to provide caseworkers with the training they need to be successful on the jobs, without requiring undue amounts of additional travel or overburdening their already hectic daily schedules. At the same time, we in the training department have a responsibility to design training experiences that adhere to the current research in learning acquisition and transfer.

CPS Training was challenged with two specific tasks 3 years ago: to develop a plan for incorporating distance education into the preexisting trainer-led training, and to consider distance education as a training delivery mode for all continuing staff development training. The tasks were complicated by a simultaneous mandate to expand the training department and the length of basic skills development (BSD) training. In a matter of months CPS training grew from a department of 1 to a department of 43, and the BSD training course from 6 weeks to 12.

Texas CPS has approximately 6,000 staff (caseworkers, supervisors, and casework assistants) spread out across the state, a state with over 250,000 square miles, making planning any new training endeavor challenging. Add a limited travel budget and an already overworked staff with lim-

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ited time. With these obstacles in place, CPS training was ready to take on the endeavor of e-learning!

The learning management system adopted by the training department, Moodle, was flexible enough to be used for stand-alone computer-based training (CBT) modules, or to house online pieces of a blended learning solution. The first distance training projects developed in CPS were for ongoing training of existing staff. These projects were self-contained Flash-based projects. The target audience of caseworkers found the opportunity to take training without travel a great benefit considering their busy days and heavy caseloads. Two years later we had more than 20 self-contained online learning solutions available for staff. However, concerns were growing that the lack of personal interaction made it impossible for staff completing the CBTs to obtain answers during the training related to their case-specific questions. Leadership was also expressing concerns that staff might not be completing all parts of the CBTs. These concerns would need to be addressed in the next large training request.

As the end of the fiscal year approached, travel funds dried up and that new training request arose. The agency would be adopting an entirely new model for addressing the healthcare needs of children in care. How to train 4,000 case workers and other staff on a new agency-wide healthcare model for children in the care of the state with very few travel funds? And, of even greater concern, how to do so in a way that allows for interaction related to their case specific questions? Oh, yes, and how can we be sure that they are the ones who completed it?

The training department determined that there were several needs, and that some were, as you might expect, not training needs at all. First was the need to overcome the concern that distance training doesn't facilitate transfer to the work place;

that distance learning doesn't provide enough opportunity to discuss case-specific information and thereby make it truly meaningful for caseworkers. In addition, we needed to reach about 6,000 staff across the large state of Texas in a 6-week period, include staff from the healthcare provider in the training presentations, staff would need to be assessed on their understanding of all of the information, and we needed to address the issues relating to completion of computer-delivered training by staff.

The answer for CPS Training was a four-part approach. An introductory, standalone CBT was developed to introduce caseworkers to the topic, give them general information about the upcoming healthcare model before the public knew it, and explain the trainings to come. Next was a webinar. Webinars were chosen because of the opportunity for interaction with a live presenter or presenters. The webinars were delivered to 300-500 caseworkers at a time across the state. They were scheduled over a 4-week period and were hosted by CPS staff specialists on the topics (usually around four specialists) and by representatives from the healthcare provider. With presenters from various specialty areas participating in the webinar simultaneously, staff had someone who was highly qualified available during the training session to answer their questions.

From a training design perspective the webinars are where casework-specific practice changes were addressed. It is also where caseworkers could ask questions via chat and hear the real voices of the program. The healthcare model also included a new electronic health information management system. A stand-alone CBT was developed to introducer caseworkers to this new system. However, this CBT was not made available to staff until after the webinars had been completed; we wanted to provide a firm foundation for each phase of the training. Assessment of the information learned about the most critical

areas to case timelines and federal completion requirements ensured leadership that all casework staff had been prepared to use the new healthcare management model. One last piece, though, was required; for any change to be successful, there must be support for the change from supervisors and managers. To facilitate this we included a leadership seminar. During this 1-day seminar, leadership staff were introduced to the basics of change management, to their role in the success of the training plan, including supporting and verifying that their staff had indeed completed the training as required, and were provided with the tools to do so successfully.

All too often in distance education we forget some basic principles that we all know apply to successful face-to-face training such as: how applicable the learner perceives that training is to their job is related to the transfer that will be achieved, that people need a way to make learning meaningful to them and their specific situations, that trainers adapt curriculum on the fly based on how well their class is absorbing the content, that the training department does not provide training in a sterile, sealed vacuum, and, perhaps most important, that people need potty breaks!

Our approach integrates these fundamentals of training into a distance training plan, engineered specifically for the needs of our audience and situation. Leadership staff were involved early on and their role clearly defined. They were given the tools to ensure successful participation by staff in the training program. Staff were informed of the training plan before it began with frequent communications describing what would be coming. Excitement was built using trial webinars across the state as the training department and the information technology department ensured that the network could handle 500 people on a webinar at a time. The webinars included polling questions to help the presenters assess if the audience was "getting it." The webinars also included a question and answer function, but this is only meaningful if the presenter can answer the questions. We included up to four extra behind-the-scenes presenters from different specialty backgrounds whose role was only to answer questions, and one who was there to assign questions. In this way questions specific to the participant could be addresses.

The course page that was set up in our learning management system included links to all pieces of the training program and to some additional resources. For ongoing support after the classes were over, a forum was developed in the learning management system where subject specialists could enter once a week and answer staff questions.

It has been too soon to complete our formal analysis of learning transfer; however, we recently experienced the simultaneous removal of a large number of children due to concerns to their welfare. This coincided with the completion of the training plan. For the training department, we inquired as to the success of caseworkers implementing the new healthcare model during this time. While it is not a formal evaluation, we were exceptionally pleased to discover that our caseworkers were not having issues with how to use the new healthcare model; from a training department perspective, that is successful transfer of learning!

This experience has shaped what will come in CPS training. As fuel prices skyrocket and state budgets feel the squeeze, alternatives to face-to-face courses will be considered more and more frequently. These alternatives need to be firmly grounded in adult learning theory and tailored to the needs of the audience and the topic. Each time we are challenged with considering how to bring powerful, change-oriented training to 6,000 caseworkers and 100 leadership staff spanning 250,000 square miles for less than $100,000

we look at the possibilities before us, and don't choose one, but select from an assortment of good options. In this case it was one face-to-face session, two CBTs, and 20 webinars, but as we strive to keep the social in distance learning, and as the options to do so are ever-widening, the exciting this is that it never needs to be the same thing twice!

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Online Course Development

Why a Regular Web Designer Doesn't Make the Grade

James Bandy

The facilities expense and that of hiring qualified professors, combined with the rising trend of busy professionals not wanting to travel to a physical classroom, makes the decision to build out the cost-effective infrastructure of online learning an easy one. That's why many distance education departments and corporate executives turn to Web designers to develop courses to train their students and employees. Many times, this

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decision results in a waste of time and money and can be frustrating to organizations simply because Web designers are not trained in the area of creating effective e-learning courses; usually their focus is visually appealing aesthetics. For successful online course production, you need to work with a developer who has proficiency in building programs from start to finish while accomplishing educational objectives in every step of the process.

It's a common misconception that if you can put together a Web site, then you can make an e-learning course. In reality, an effective course needs to have the same care and expertise put into the educational aspects as the design elements. While a Web designer is happy to catch a person's eye through bright colors, graphics, and flash, a course developer ensures that the learner is receiving and retaining the right message. This means that simply drawing a student's attention with a visual image is not enough. Course developers understand that images cannot be used as entertainment, but as learning tools, since students must be able to recall specific material at test time. Since Web designers aren't usually trained in teaching, or knowledgeable about the factors of educational design, their e-learning course design tends to distract a student from learning. For example, in a project management training course, a Web designer

used a moving image of a crane repeatedly picking up an object. When students were asked what that page taught them, they recalled the moving graphic over any piece of actual information. In courses made by competent developers, pictures are not chosen at random, but are picked carefully for their educational value and are often incorporated with an audio track for further impact and greater memory retention.

Not only does an effective e-learning course incorporate graphics of educational importance, but all pieces of information must be placed in a specific order on the course page. This idea, rarely considered by Web designers, is implemented by experienced course developers so that learners are presented with information in proper sequence in order for maximum memory retention.

Also, course content must be engaging and needs to build the right foundation. Trained developers can incorporate multimedia-rich training tools, like streaming video and audio files that contribute directly to a learner's comprehension of the curriculum. These interactive technologies involve users and allow them to better comprehend concepts and remember complicated sequences. While Web designers may work with an educator and directly receive quality curriculum, they still lack an ability to show it in a clearly arranged way. Simply uploading it to a page and making it visually attractive is not enough and can turn out to look similar to a PowerPoint slide presentation. For a course to be effective, good course developers understand the "take-away" the learner should get from each page and strategically develop each so that learners retain the content and take away a specific educational message rather than remember what image appeared or what sound they heard.

Many times, training programs need an administrative tool that manages learners and keeps track of their progress across all types of course activities. In e-learning, this element is called a learning management system (LMS). It provides a way for you to do things like enroll students into courses, handle grades, deliver test material, upload study resources, and keep records (which acts as a paper trail and is especially important if school credit is involved). Course developers understand learning management systems and are skilled in working with many different kinds (LMS' vary in their design, features and strengths). For example, does a LMS allow two-way communication between the instructor and the student? Does it support Flash applications when students take quizzes? These different features may not all apply to your training environment, and a course developer knows which ones to include and which ones are unnecessary for your needs. Course developers are able to seamlessly move students through the course process and record their progress appropriately with any LMS. Many ineffective course designs have spots that leave the student thinking "What now?" To avoid this, it is it is important to have a competent course developer recommend an LMS that fits your specific training needs. Some course developers may even be able to build the technology into the course and host it for you.

Incorporated into an LMS, two-way communication is another technique instrumental to a student's success that may not be completely utilized by a regular Web designer. Course developers know that, first and foremost, students need to be able to interact with their professor for support in understanding tough concepts or when further explanation is needed. Developers integrate the use of video conferencing, discussion boards, live chat, or simple e-mail functions to accomplish this. Communication among the students in an e-learning course is also important, and course developers often set up a forum or Web application used for holding conversations and posting questions and concerns generated by users. With Web

designers, the problem is that they may not be familiar with the different types of contact tools. It is important to employ someone who can not only incorporate communication techniques into the course, but can provide suggestions as to which ones will work best for meeting the needs in each unique situation.

When it comes to effective e-learning programs, course development is more than just making the pages look good. Skilled developers build courses that are carefully aligned to students' needs, allowing them to directly achieve their learning goals, making e-learning an essential part of education. To a course developer, the goal is to give students the exact skills and information they need at the right times, not just entertain them with a fun design.

The Future Agenda of Distance Education

A Learning Environment Approach

Irving H. Buchen

Clearly, distance education has arrived. It has successfully persuaded thousands of students and their employers of its value. Blind to color and gender, it has attracted and embraced diversity and in the process created a level of credibility that has sustained both a national and even global reach. It is now totally seamless and inclusive and ranges from kindergarten to the doctoral level, including areas such as art and nursing about which many were skeptical. It has passed the tough standards of being accredited by both national and regional

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associations; its remaining critics are few, cranky, and generational. But it is precisely when an industry settles into and enjoys the comfort zone of success that it may need to pause and reflect as to whether all the assumptions of continuity will continue to go in its favor. Above all, it may need to contemplate the high road and identify futures that are not solely, obediently, and incrementally more of the same. Although each institution routinely engages in strategic forecasting and planning, it may be bracing to factor in the directions and trends for the field as a whole. In particular, five megatrends seem discernable.

QUALITY—PERFORMANCE

Having documented again and again that distance education is minimally as good as traditional education, why should we now not raise the bar and aspire to being among the best in higher education? Now that the Ivies have joined the ranks—reluctantly and conveniently forgetting years of disdain and criticism—we should be able to compare apples and apples. Indeed, a number of our larger institutions have embarked on precisely just such quality quests and already achieved recognition of their next level commitment by their accrediting associations. But whether or not we aspire to being electronic Ivies or simply committed to steady and continuous quality improvement, the field needs

to address quality obstacles with candor. In particular because we embody the open door policy of the Statue of Liberty, one of our major problems, especially for advanced degrees, is cultural catch-up—educating and training master's- and doctoral-level students to be scholar-practitioners when they come from and are raised in learning cultures that are often non-academic and employed by businesses that are equally unreceptive to research. Of course we can compare dissertations, but will they remain researchers? Will they continue to be independent critical thinkers? Will they maintain their commitment to be innovative and make original contributions to their fields? Have we sufficiently incorporated into academic study the inquiry systems of the workplace so that the two are minimally aligned or optimally seamless? Or, finally, are we expecting too much, too soon? Will it require more than one generation for such ripening to happen? But before we settle for partial catch- up, we need to bring our collective intelligence to bear on the quality gaps of our learners, where and what we want them to be, and what interventions are needed to extend their performance stretch.

DIAGNOSTICS—PROFILES

Quality outcomes need benchmarks, but deeper and more probing ones—measures that assess attitude, tolerance, and above all readiness. We need to tap the tools currently used by HR to assess promotion and succession worthiness but applied now to learning. In addition, we need to measure the capacity to manage a learning environment in which transition is not a one-time state, but a new norm. And, most important, we need to fuse the knowledge of their learning capacity with their self-management skills—with their work ethic and ability to balance multiple lives. In other words, not only do we need to know more about our learners than ever before for our

interventions to be targeted and sufficient, but also our diagnostic profiles have to drive, shape, and determine the outcomes of the quest for quality performance. Finally and ideally, we have to invite our learners to be our partners and cocreators of their self-knowledge and performance profiles.

STATE OF THE ART—PROCESS

Constant and continuous improvement drives not only the production line of Toyota and electronic universities, but also their cheerleaders. Presidents, deans, and chairs routinely exhort faculty and staff to implement the latest improvements and hail them as significant advances of the state of the art. Initially driven by insecurity, now aspiration to perfection has increased the rate and number of process changes to keep pace with the supreme taskmaster—technology. All this heady and busy push to change has generally left small- and medium-sized institutions alone not so much by choice as by limited budgets. Not so our largest institutions, which, in their desire to be set apart and to enhance their brand, never leave anything intact or alone. They appear to have rewritten the old adage to read: "If it ain't broke, fix it anyway." The net result seems to be change for change's sake, and all involved seem to have to live in a state of constant process revision with no end in sight. The situation perhaps resembles the classic dilemma Pogo encountered and summed up: "We have met the enemy and he is us."

There is, perhaps, a need for a moratorium on such constant change shock. We may be unknowingly involved in process overkill. The challenge is not to abandon improvement but to reconsider whether the complexity of complexity is the only sign of its success—whether having to figure out or manage the labyrinth is more important than the end results and products—and whether we want faculty and

staff to spend a disproportionate amount of their time and energy being endlessly retrained. In short, we may need to create a decision checklist of change to guide our choices. Minimally, three items should be up-front: does the improvement justify and offset the dislocations and retraining adjustments that inevitably will follow; to what extent does it involve more steps than what it is replacing; and finally does the improvement simplify or complicate process?

COSTS—HOLDING THE LINE AND UPGRADES

Ideally, distance education should be the least costly education option. It involves virtually no bricks and mortar, many of its services and operations are outsourcable, employs a significant number of adjuncts as independent contractors without benefits, and pays nothing to deliver its electronic programs. No wonder why many distance education institutions were originally (and still are) proprietary and why, as for-profit businesses, they have attracted so many venture capitalists (and still do), and why they routinely increase tuition and fees like their traditional counterparts who have elaborate plants and expensive football teams to maintain. But a few words to the wise: tuition remission programs along with other benefits may be cut or eliminated; student loans may be increasingly weighted in terms of cost/benefits; major firms will create (many already have) their own universities and perhaps seek alliances to confer degrees; etc. In other words, increasing costs may kill the goose that lays the golden egg.

What, then, should distance education do? Minimally, consider two courses of action. The first is cost review: where does the money go, for what, with what returns on investment? And if we are planning to increase tuition and fees, where is that additional money going? What is it buying? What can our recruiters and our advertisements then claim as value-added? The other course of action is to consider offering different levels of degrees pegged to increasing costs—to differentiate programs by their upgrades or perks. The degree requirements would not change, only the ways to get there. Thus, the most basic level would be offered at a no-frills lowest cost, typically tied to tuition remission allowances. The next level would offer the same program, but with a number of intermediate upgrades as options. Finally, there would be first- or business-class version.

It is not totally new. Every institution at one time or another has come up with various good ideas of add-ons or improvements that were rejected because they cost too much or it was unlikely anyone would be willing to pay the price. Now they can be salvaged and built into program levels which pair benefits and charges. If disturbed by the elitism, an institution can offer some of the higher price options at the basic level as costs go down. It happens every year in the auto industry. This year's luxury features in the Cadillac appear in next year's Chevy.

What would set the levels apart? Again, a number of universities already have been exploring implementing such multiple levels, although in piecemeal fashion and without an overall strategy. One powerful and popular upgrade is career enhancement applications: providing executive coaches at middle and top levels; offering various consulting services such as interview prep and resume review; supporting development of presentation skills of speaking and PowerPoint. Curriculum options generally consist of cutting-edge developments offered as overlays or extenders—such as sustainable management, simulation and scenario forecasting, and so forth—new areas that upgrade standard areas of study to catch up with current trends. Finally, like a corporate jet, the newest bells and whistles of technology, especially globally driven, can dramat-

ically enhance traditional inquiry. In short, one of the signs of creative cost review may be the discovery of new program and marketing options that not only sharpen competitive edge, but also invite the exercise of innovation to a sea of curricula sameness.

ECO-LEARNING

Distance education is the supreme version of ecological accountability. It saves energy and pollution by eliminating commuting to class, maintaining an elaborate plant, requiring faculty and staff to be in place (rather than in time), and operates 24/7. If we sought to create an education system that would respect and honor the environment, we could not come up with anything better. But it is not perfect and that in turn requires minimally three follow-ups. The first is internal eco-accountability—examining all resource uses and practices, reducing or eliminating all paper trails, and converting all operations to highest eco levels. The second is to raise to new levels electronic or voice attendance at meetings or professional conferences. That already has been adopted by some societies that offer annual meetings with two tracks: actual and virtual. Finally, offering such adaptations to other organizations—a kind of electronic outsourcing service offered by innovative eco-e-learning institutions as a public service.

In summary, then, the future of distance education is happily defined by challenges, inside and out, short and long term, wishes and warnings. Are there other trends that should concern us? Of course, but the above provide a good start. Besides, when pursued they will unearth and lead to others. The only fly in the ointment is leadership—not that our presidents will not lead the charge but that they will empower it to be all-involving, collaborative, and collective. Or, as an old Tao proverb advises, "When leaders lead well, the people think they did it themselves."

FIVE MEGATRENDS:

1. QUALITY—PERFORMANCE
2. DIAGNOSTICS—PROFILES
3. STATE OF THE ART—PROCESS
4. COSTS—HOLDING THE LINE & UPGRADES
5. ECO-LEARNING

The Activities and Educational Model of CARID of the University of Ferrara

Giulia Calvani and Silvia Micarelli

"If the industrial era nourished our physical being, the Age of Access feeds
   our mental, emotional, and spiritual being."

—Jeremy Rifkin

INTRODUCTION

The age of information, as ours has been defined, has knocked down space and time distance in all human activities: from politics to religion, from business to personal relations. And education, understandably, couldn't be left out. That is why, today like never before, the world of education is at a turning point, and, especially at an academic level, it needs to relate to the technologies of its age.

A new and diffused demand for instruction is forcing universities to rethink their organizational model. In order to do this, they have to elaborate and combine new

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languages, concepts, methodologies, and learning strategies.

Taking this into account, the University of Ferrara was one of the first in Italy to create new learning models and start distance education activities through CARID.

CARID

CARID, Research Centre Athenaeum for Innovation and Distance Education, is a multidisciplinary research and education structure that promotes innovation and the practice of teaching/learning through multimedia technologies on the Web. It is one of the most important realities in the development and delivery of distance education in Italy. The center offers courses at a distance for all graduate and postgraduate academic titles: degrees, postgraduate master's, specialization courses, updating, and professional training courses.

In order to better understand CARID, its activities and its future, we have interviewed Paolo Frignani, director of CARID since 1997 and Professor Giorgio Poletti, head of the educational design team of the structure. The main strength of CARID, according to Frignani, is

> the fact that it deals with distance learning but mostly with teaching innovation. And distance learning is part of this innovation. Innovation which means the use of technologies in post-secondary education, in particular in the creation of courses, learning paths completely at a distance or the use of technologies as an added value to traditional teaching.

HISTORY AND PERSPECTIVES

Because in Italy CARID is one of the centers which has been operating in e-learning the longest, it has dealt with the profound changes that this educational model has undergone in the last 10 years. Professor Poletti explains how CARID has adapted to these changes:

I'd say that it followed the evolution of the interactions in the Web. We can't deny that the Internet has given the rhythm to the evolution of the interaction models and therefore of the educational models. The evolution can be summarized in the fact that it started as one-way and it became two-way, so when education used a one-way network you could send a fax, then a book, then a Web site with little interaction but the idea was "I send you something, you're the final recipient." E-learning was a tool but not a new educational model.

As it always happens, when computer science walks in, it ends up modifying the process which had evoked it and improving it.

By increasing the level of interactivity the e-learning model changes as the web does. E-learning tries to create education in the Web and not using the Web as a mere communication medium.

CARID is an extremely dynamic structure that, in the past, was able to adapt to constant changes. That is why we asked Frignani about CARID's future perspectives. He told us that it is right now

> evolving into two separate structures which will work together: an "e-learning school," an athenaeum for distance learning which will manage distance and blended education, and "CARID lab," which will essentially have a research purpose on the diffusion of new technology in a postsecondary context.

MISSION AND ORGANIZATION

The mission of CARID is to promote innovation in the practice of teaching/learning models. In particular, CARID has two main objectives: first, "to analyze the methodological and technological aspects of distance education through research and publishing" and, second, "to manage university courses experimentally in a distance modality (integrated with full time traditional activities such as seminars and labs) in collaboration with education, tech-

nology and content experts" according to Poletti.

In CARID, the staff is divided into two units, each composed of two team members:

Research Unit
- Team A: communication experts involved in training and supporting coordinators and tutors and in analyzing the methodological aspects in research activities.
- Team B: instructional designers and programmers in charge of developing the technological platform which supports the learning activities and of developing new models of personal learning environment (PLE)

Operative Unit
- Team C: coordinators and tutors who manage the learning activities.
- Team D: system analysts and multimedia content producers involved in the management and archive of contents on the platform.

E-learning courses are therefore the result of different professionals who cooperate in order to create efficient and effective learning environments.

THE OPERATIVE MODEL

The operative model of CARID is based on the distance management of five essential elements: design, production, delivery, tutoring, and assessment

DESIGN

The design phase of the courses involves many people who work in team. The group is made up of education experts specialized in different subjects and experts in communication systems and data elaboration. In general, during the design phase the objectives and target learners are defined; the learning strate-

gies and the technical solutions to be adopted follow together with the time to be reserved to individual support.

We asked Poletti how he structures an online module:

> It depends on the students and on the level of elaboration it requires. There is usually a first part in which we organize all the paper documents and consulting material, a second phase related to the interaction through a video-lesson, or chat or other synchronous tools and a forum phase which maintains the attention and leads the students.

PRODUCTION

Content experts coordinated by a scientific area manager are in charge of defining the cognitive fields of the learning units and deciding on the tools (printed text, audiovisual support, digital documents) necessary to content delivery.

The development phase consists in preparing the materials needed to carry out the courses. This task is carried out by teachers and researchers who have skills in both distance education and their subject matters.

The objectives, the content, and the procedures are selected and defined in detail together with the timing. The materials are then gathered through tools of exploration and learning of cognitive fields, tools of content delivery, multimedia tools, and assessment tools.

Poletti describes the main difficulties in preparing a learning model destined to online delivery: "It is a problem of adequate time availability for the learning production because if a 1-hour lesson means an hour and a half preparation, to prepare a learning object I need 5, 6, 8, 10 hours of preparation."

DELIVERY

Learning activities managed at a distance are based on the use of a technologi-
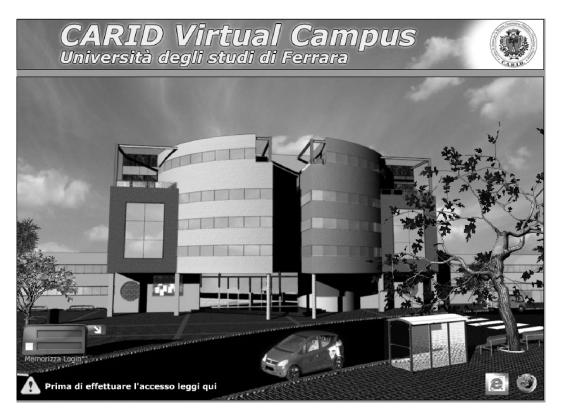
Figure 1.   Online platform CARID homepage.

cal platform that the students access through a Web site. The model of distance education applied in CARID and implemented in the online platform is characterized by asynchronous communication among those involved in the learning process: users, tutors, and content experts. The platform is only accessible to them through an identification form: the online user is presented with a general page on the course organization, containing the links to general documents (initial quiz, general forum, news, general info) and the links to the pages of the single subjects; these contain the links to the contents, the exam organization, and to the structured forum.

Printed units are used to lead in the exploration of the cognitive context of the subjects and are integrated with other resources organized in Web pages, interactive hypertexts and hypermedia, and bibliographies.

Assessment and self-assessment is based on a number of questions (generally 25) which match four short answers: each online quiz is immediately followed by the communication of the result on a Web page that includes feedback on why each answer is or isn't correct.

The structured forum is a fundamental tool of asynchronous interaction on the Web among students, tutors, and teachers: it allows users to not only define the title and text of the question, but also to monitor contributors and their exact moment of participation by selecting a topic from the course menu. Because of this organization, each contribution is placed in the correct position within the course context, and because it easily traceable, it optimizes the

LEGENDA Domanda   Risposta   Contributo

DATA INTERVENTO: �277 OGGI   �277 ENTRO 5 GIORNI   �277 ENTRO 10 GIORNI   ☐ OLTRE 10 GIORNI   ☐ NESSUN INTERVENTO

Forum Strutturato: Area: progetto sovvenzione globale

Argomento	☐	Titolo	Allegati	Links
componenti didattiche del master	▤	Cosa intendiamo con componenti didattiche		
lezioni frontali	▤	Come avvengono le lezioni frontali?		
	...▤	re: Come avvengono le lezioni frontali		
	...▤	re: ruolo del docente	si	
	...▤	Opinione diversa	si	
stage	▤	Come si organizza lo stage		
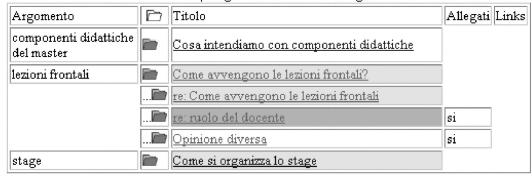
Figure 2.   CARID online structured forum.

organization of knowledge gathered through the use of the Web.

We asked Professor Poletti to further deepen the aspects related to the use of the platform by the teachers.

> We have a double plan because we have a convention which links the University of Ferrara to the technological pole of Argenta for distance courses and the use of a proprietary platform naturally means that some activities need to be adapted to what this offers, a sort of compromise. On the other hand for both traditional and distance courses we manage and test a series of LMS systems and open source modules mainly toward personal learning environment with the possibility of learning environments in which teachers and learners access to those modules they're interested in.

The use of e-learning technologies tends to elevate the level of structure of the cognitive contexts through cognitive maps related to the different courses, which have the double function of communicating the main relations of the subject and of supporting them through forums and quizzes. In other words, the current pat- tern of navigation inside the single courses is characterized by the presence of option menus, destined to evolve toward a cognitive map in which assessment, contributions, and forum participation can be linked and be visited, at the level of single topic in the learning context; this development entails higher quality in the organization of knowledge and in the definition of the internal logical connections in the cognitive field, providing flexibility, thanks to the possibility, exclusive to the dynamic systems of information such as that adopted by CARID, to easily modify the structure of connections.

In this direction the distance learning platform follows these guidelines supported by innovation in hardware and software:

1. Knowledge is organized in cognitive maps in which the contributions are constantly updated, whether produced by teachers, experts, tutors, or users, in the form of resources, links, and forums.
2. Documents are written through digital tools that require the progressive defi-
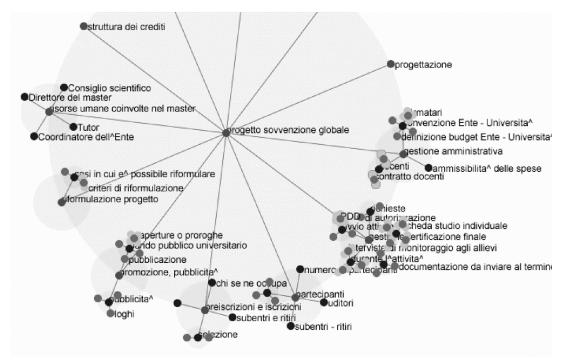
Figure 3.   CARID course structure cognitive map.

Figure 4.   CARID e-learning platform.

Figure 5.   CARID introductory seminar.

nition and differentiation of a new interactive and multimedia language, characterized by certain grammar and symbols.

3.   Learning is customized and registered by structuring and transmitting the contents within structured maps. Tools, modules, and personal contributions are registered in the data warehouse of distance education, allowing tutors to deeply analyze the educational process.

These three lines come together in CARID in the design of an e-learning platform that answers to the diffusion of a structured communication culture, in relation to the potentialities offered by the current technologies.

TUTORING

Each student can rely on adequate services of support and educational assistance that builds the interaction process by eliminating the condition of physical distance. Learning assistance is provided during the entire learning path through appropriate communication media and face-to-face conversations. Qualified and competent staff carry out the function of "tutor" who not only provide general technical information, but also detailed information on the contents of a specific course.

To better understand the function of such an important figure, we have interviewed tutor Alessio Pellegrini, who answered in this way to the question on his activities toward the learners:

It depends on the academic year. At first we do orienteering, we answer e-mails and phone calls to provide information on the courses. Then we organize the initial seminars. Then just before the beginning of the lessons we give learners access to the platform and allow them to familiarize with it in order to solve the

main problems and show how the course works. During the year we organize internships, labs and seminars, providing answers to possible doubts.

Pellegrini adds that on these occasions the relation with students becomes informal, and

> it gets easy to understand problems especially when at the beginning it's difficult for them to understand how courses are managed and the university system in general. As they go on they solve this problem connected with distance. We try to help by organizing seminars and labs where study groups are created and sharing occurs. This kind of relationship is encouraged in appropriate spaces in the platform.

ASSESSMENT

In distance education, maybe more than in other learning situations, it is necessary to constantly assess learning activities and the participation of students. The evaluation system implemented in CARID provides constant information through an initial analysis of the characteristics of the students, a constant monitoring of the mandatory and spontaneous interactions in the forums, intermediate tests, and final verifications.

In order to fully understand the evaluation model used in CARID we have asked Poletti, who tells us:

> Until now we have had two separate evaluation methods according to whether they were for graduate or postgraduate courses. For degrees there are formally three evaluation moments: interaction through a forum during the entire length of the course; a self-assessment stage through structured tests with an immediate feedback; a final written or oral face-to-face examination.
>
> In master's there is a triple evaluation: one on the interaction on the web, (forum participation, language use, interest in the topic) which carries about 20, 25% of

the final score, one on a series of timed tests on the web, and the third phase of a more traditional final exam in presence which carries about 50% of the result.

CARID has progressively acquired and consolidated the necessary technological and methodological skills and tools for the management of e-learning courses for each of the phases described.

ONLINE STUDENTS

At the end of this analysis the question is how the students of CARID deal with online learning, on how they use the interactive tools made available by the structure and what kind of relationship they have with the other actors of the e-learning courses.

An interesting consideration on the relation between online teachers and students is offered by Poletti, according to whom:

> distant learners are the most present ones. The relationship with them assumes a continuity which is rare with students in presence. Traditional students know that the lesson is the topical moment and if there's a reception room they come to ask for explanations but they see these moments as the direct support to their learning and they have books at home. Distant students have instead the idea that they should be somehow supported so usually we use continuative relationship devices such as emails.

In order to better understand the point of view of the students, we spoke with Enrico Margotta, enrolled in the second year of the degree course "Technologist in Audio-visual and Multimedia Communication," who told us about his learning experience. First, we dealt with the relation between students and teachers:

> The relationship with students is a little particular because you don't see them every day. When it happens that you

Figure 6.   The online student.

meet someone who you've seen at other exams, then you chat, you get to know them. Otherwise it's hard to have a strong relationship. With teachers, it depends; generally they're very helpful.

The next point was on the tools that are used daily. Margotta told us that most of the activities are carried out on the platform but that he also finds the site www.tecnologo.net very useful to share information and materials on the degree course with other students.

Tecnologo.net is a virtual community created by and completely managed by students and doesn't have an administrative link to the University of Ferrara. Students exchange information and material to easily deal with the learning activities. They also organize face-to-face moments out of learning obligations.

THE INNOVATIONS OF CARID

A fundamental part of the activities of CARID is research and educational innovation. An example of such activities is the latest success of CARID: CaridTV. The idea of this new application is explained to us by Frignani: "We tried to put together and use not only computer science but also video in the management of distance courses for students in order to create a television format which is highly interactive."

In order to comprehend how this application will be used within the teaching model of CARID, Professor Poletti tells us about how he is working to implement this tool within his courses and which are the main difficulties:

At this moment we are still designing CaridTV, we haven't used it within a course,

Figure 7.   Tecnologo.net.

Figure 8.   CARID television.
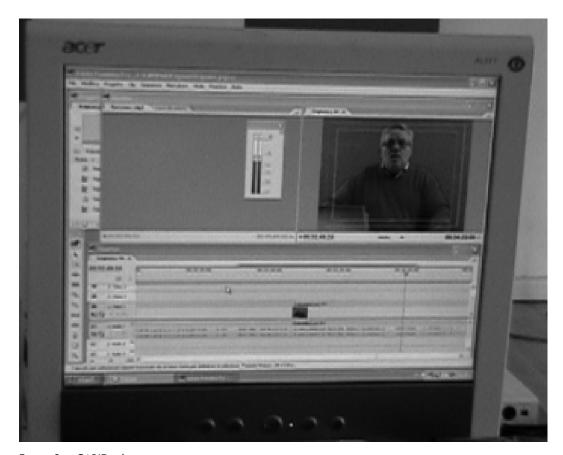
Figure 9.   CARID television.

except for spot interventions, to introduce some seminars but we haven't integrated in our course yet. I'm thinking of using it synchronously for documents, that is giving the chance to provide handouts in the moment I'm discussing them, sort of like what happens in class.

Thanks to the project CaridTV, CARID has recently won the prize Aldo Fabris with the following notation: "The project allowed CARID to develop a university web-tv 'Carid-tv' able to implement and deliver multimedia learning materials, enabling the audience to access a variety of personalized learning paths." [Note: At its sixth edition, the Prize "Aldo Fabris" intends to point out universities, schools, companies, public administrations and

people who have created and developed learning projects which are marked by impressive results in learning obtained at an individual, team and organizational level through the promotion of the growth and development of the people and working communities.]

CONCLUSIONS

The origins of the success of CARID, says Frignani, are in "having believed in e-learning" and in "having created a degree course which has a double objective, that of being innovative and it is still today the only one in the National area, and that of being completely delivered at a distance."

CARID understood the importance of some fundamental concepts in e-learning,

but today the world view of e-learning is changing: the enormous interest in interoperability of platforms for content exchange, the development of new technologies of document management opens the way to a modular classification of the cognitive supports, which is a true base of sharing and integration. Research in CARID is aimed at giving value to its great assets of contents in relation to their structure and interchange with other organizations in the field.

FRONTIER SCHOOL OF MIDWIFERY & FAMILY NURSING

The Frontier School of Midwifery & Family Nursing (www.frontierschool.edu) has an immediate opening for an **Instructional Designer** responsible for the development of online courses and the use of technology to enhance student learning. Masters degree in instructional design and experience in online learning. Experience working with graduate nursing or healthcare preferred. Faculty experience desired. Position is located in Lexington, KY.

Send resume to shelley.aldridge@frontierschool.edu

Passport to Italy

Claudio Celeghin and Paola Rochira

Are you interested in learning the Italian language but you are fed up with studying hours and hours out of a book? Do you need a smarter way to learn? Would you like to know more about Italian culture? Since June 2008 there has been a better solution: Passport to Italy!
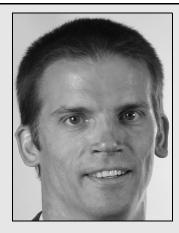
SUBJECTS

The idea of the project "Passport to Italy" originated at a convention between the Fondazione Ugo Bordoni (FUB) and the Tuscia University of Viterbo. This convention mainly dealt with research concerning phonetics and voice.

Fondazione Ugo Bordoni is an institution of high technological culture that works on inventing new strategies to be developed in the communication field. It also assists the Department of Communication in undertaking and solving possible technical, economical, financial, managerial, normative, and regulatory problems encountered in its activities.

As written in the official Web site,

> FUB has a sound experience, recognized at an international level, in several areas which include radio broadcasting, optical communications, security in telecommunication, network issues, multimedia communications, and others. At an international level, it cooperates with several institutions by participating in relevant standardization matters for European research programs.

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Tuscia is an Italian University close to Rome with six main faculties: agriculture; cultural heritage; economics; languages and foreign modern literatures; mathematical, physical, and natural sciences; and political science. It is one of the main research centers in Italy about languages—Italian and others—and about the Italian culture in particular.

Two years ago, Tuscia University and the Fondazione Ugo Bordoni decided to work together on a new project concerning the Italian language, to be applied to an e-learning course. In order to achieve this goal, Tuscia University of Viterbo was committed by Fondazione Ugo Bordoni to provide content by creating a team led by Barbara Turchetta, a specialist of Italian and foreign languages, with long research experience in local dialects.

Andrea Paoloni of the Fondazione Ugo Bordoni was the project leader.

The technical part of the project was managed by Infobyte S.p.A., a private company founded in 1989, provider of integrated communication, multimedia, virtual reality, and learning, whose mission is "technology to communicate!"

All the information presented in this article was gathered from interviews of Barbara Turchetta (Tuscia), head of content, Andrea Paoloni (FUB), and Jose Luis Sanchez Soler, Infobyte broadcasting project manager.

OBJECTIVES

The purpose of the project was to manage and plan a clever Italian course, much more Italian-culture oriented than the traditional ones already available.

In particular, as Turchetta said,

the aim of the project was to give a general idea of culture and daily life in Italy instead of giving a traditional vision of our nation that is set in course books. Books indeed are mainly dedicated to history, literature, and history of art. The main reason was to give a chance to for-

eigners to better understand Italy and Italians: the way they think, the way they work together, the way they live. For example we have some modules which are focused on the family, the daily life in Italian families.

This objective was pursued through many educational choices: the most important one was to use some videos from an open archive of RAI Radio Televisione Italiana, the Italian public service broadcaster. During the design phase, the instructional designers gathered from this huge archive several videos concerning daily life in Italy in order to represent the Italian culture.

TARGET

The course Passport to Italy has been thought to be useful for those who are not able to attend Italian classes, for example those given by the Italian culture institutions in foreign countries. They are able through their computers to learn something more about the Italian culture and language. The course was therefore planned for different types of people who would be interested in the Italian language: it is intended for professionals, for example, who might use the language to interact and converse with Italian professionals. And also to Italian or foreign students—school or university ones—who wish to learn a little Italian to keep in touch with Italian friends.

The course is also intended for specialists, for example those working in technical subjects such as restoration or art history who might need to learn some technical Italian words, in order to be more closely connected with the Italian working context.

METHODOLOGY AND COURSE STRUCTURE

The original idea of the Passport to Italy project was to plan a course of seven lessons, but in the end it was decided to move

Figure 1.   The cartoon-like tutor.

to a shorter course of 30 modules of about 30 minutes each.

Each of these modules has been divided into three educational units and each unit contains a video chosen from the open archive of RAI Radio Televisione Italiana. This archive includes all the videos of the last 20 years which RAI has broadcasted on several channels. Each unit of the course is run by a cartoon-like tutor.

The last section of each unit concentrates on grammar and structural exercises. The instructional choice of these exercises is really interesting: they are inserted in each unit in a way that the learner doesn't know that they are grammar and structural exercises. This method has been used in order not to force people to think about exercises: the evaluation section is in a way confused with other things that appear on the screen. All these exercises allow each student to know where he or she is during the course, if he or she has understood all the things he or she encountered in the unit.

In order to give more help to the student, the last screen of the unit gives him the idea of how many mistakes he did during these exercises, giving also suggestions on what to do. If he did very well he can go on and he can continue the course. If he didn't do very well, the tutor advises the student not to go on but to go back and start the course again.

So, looking at the whole course structure, each module can be divided into different sections: in the first one the module title is presented with a hint on the unit and a picture or an image related to the topic of the lesson.

The scene is accompanied by an evocative music in the background. Then a 2-3 minute video is presented: students can read the text of the video on the screen. So the idea of the objectives for each lesson is explained by the video (phonetics, morphology, syntax).

Furthermore, some images of the videos are presented separately, in order to underline important actions and concepts that will be treated with more accuracy in the section about the structures. Ten true/false questions follow, which the student should answer by clicking on the corresponding button.

The second section is dedicated to the new words that have to be mastered by the student during the unit. These 15-20 words are taken from the text in the video or from the same semantic environment. Each word is shown by an image or an animation that represents its meaning. The student can find the same words also in the Glossary.

The third section is dedicated to linguistic structures presented in the unit (phonetic, morphology, syntax). All the explanations are given by the cartoon-like tutor, who writes them on a blackboard and pronounces some key-phrases.

The fourth section of the course is a game. The unit video is presented again, and text appears on the screen in karaoke style. At this point some expressions are read by professional speakers.

The last phase is the learning assessment: each student is provided with 10 true/false questions. Answers are given only to the first two units of each module and access to the third unit is restricted.

At the end there is a "self-contained" course with timing: this means that there is

Figure 2.   The words.

no need for a physical teacher. Each student can attend the course from his own house or from the workplace at the time he prefers. This is probably an advantage for foreigners who decide to choose this kind of course.

TECHNOLOGY

The course was developed by Infobyte by assembling different kinds of media. Videos were linked to flash screens using a TV-like interface. On the bottom of the page the navigation buttons are placed to go forward and back through the unit screens.

On the left of the page there is a vertical menu composed of three items: the Guide, linked to some instructions about the course, the Glossary, to quickly reach new

words mastered during the course, and the Close button to log out of the course.

The learning environment is the platform Docent of the company Italdata. The choice of the platform was mandatory because it was the same used for other projects by the institutions involved. Each learning object is SCORM 1.2 compliant, and therefore interoperable with other platforms.

PHASES OF THE PROJECT

The activities were planned by the three parts involved in the process as three different groups that worked together, but also on their own.

Paoloni was committed to managing the whole process, the Tuscia University of Viterbo was engaged in content production,

Figure 3.

and Infobyte was in charge of content development.

The university team was composed of five members who worked on the course in order to create the contents of the 30 modules and the 90 units. All the contents were provided in one year.

The Infobyte team was composed of 4 instructional designers involved in storyboard reading and content analysis. Generally this is a hard job because subject matter experts (SME) are not always experts in distance education, so very good communication between them is necessary in order to have the best results on both the content side and the design side.

So, the instructional designer has to find the best way to represent content provided by the experts, but the last validation must be always given by the subject matter expert in order to avoid misunderstanding about the content.

After having completed the storyboard, the technical part of the job is finished: graphic designers create animations and pictures for the course screens, then they are developed, made SCORM 1.2 compliant, and uploaded on the Docent platform.

The last and most important phase of the whole process is the debug phase. After having uploaded the content, Tuscia's subject matter experts have to debug it by watching each unit accurately, looking for possible mistakes. These mistakes are written on a board and sent to Infobyte for correction.

The prototype of each unit is also submitted to a sample of the target population in order to observe their satisfaction and possible problems in attending the course in order to make it more usable, comfortable, and effective for the students.

All this exchange of materials and ideas is supervised by Paoloni.

AND WHAT ABOUT THE FUTURE?

Paoloni, the project leader, told us of some very interesting initiatives—the next steps for this project. First of all, he wishes to give the student a certificate from Tuscia University or another institution, corresponding to the course level attended. This certificate will be given to the student only if he passes a regular exam about the course in a classroom with a residential teacher. It is a great opportunity for foreigners in Italy or worldwide who can write in their resume they have a recognized title of their knowledge of the Italian language.

The second goal Paoloni wants to reach in the next few years is to find an international institution that wants to diffuse the course worldwide.

Last but not least, after having found this institution, they will go on with the project by planning and managing intermediate- and advanced-level Italian courses.

Passport to Italy is a project that is going to grow in the future. In Italy it represents the achievement of a very important goal: for the first time public institutions and a private corporation joined together to create a course not strictly related to formal learning but to the diffusion of the Italian culture and way of life.

Another important strength of this course is the use of the videos taken by the RAI archive: Italian people consider it a cultural legacy and they are proud to diffuse those videos worldwide.

So, if you want to break with the past and learn Italian language in a smarter and more interesting way, click on Play and enjoy yourself!

Old Dominion University Offers Real Connections for Virtual Students

Rob Kilroy

As more Americans than ever seek higher education, distance education has become a strategic initiative for the nation's colleges and universities. While traditional campuses reach their on-campus limits, academic institutions like Old Dominion University (ODU) in Norfolk, Virginia, are breaking new ground on the virtual campus of the future.

ODU has long been recognized as a pioneer in distance education, due to its early adoption of a satellite broadcast network.

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Today, nearly 15% of the university's more than 20,000 students attend classes remotely, completing a wide range of undergraduate and graduate degree programs without ever coming to the main campus. ODU's virtual campus has grown to 50 remote sites and 200 classrooms spanning Virginia, Maryland, Arizona, Washington, and U.S. Navy ships deployed abroad.

As ODU's distance learning program has expanded, the university has endeavored to break down the barriers that separate distance classrooms from their main campus counterparts. The university has also sought to improve the efficiency and cost of delivering courses remotely.

In 2006, ODU made a strategic decision to invest in a satellite network supported by iDirect and X-Analog Communications, Inc., a satellite systems integrator. Through an ambitious three-phase rollout, ODU has been able to reduce its operating costs, increase and improve its video distribution to classrooms around the continent, and make available a wealth of digitally archived lectures to its entire student body.

SATELLITE VOICE CONNECTIVITY CUTS COSTS, IMPROVES CLASSROOM INTERACTION

To offer accredited university programs that connect students directly with the university's faculty, ODU originally extended

Figure 1.

Figure 2.

Figure 3.

standard telephone services to remote classrooms, allowing students to ask questions in real time during lectures. However, telephone toll charges incurred over hours of daily instruction across hundreds of classrooms were costly to the university. ODU was being charged long distance fees for the duration of every course at each classroom site, whether the remote student was interacting with the instructor or not. In addition, the costly phone bridges and phone line connections were often plagued by poor voice quality.

ODU partnered with X-Analog to find a cost-effective alternative solution to provide IP voice connectivity via satellite from remote classrooms to the main campus, integrate video distribution via the IP satellite system, and prepare remote facilities for other IP-via-satellite services such as file sharing, video conferencing, and so on. X-Analog proposed a two-way, IP-based satellite network from iDirect. Based on the iDirect platform, X-Analog and ODU engineered an innovative VoIP satellite intercom system.

The system works by establishing a VoIP session from each remote site to the main campus in Norfolk, Virginia. Students at the remote sites have a microphone at their desk and can interject at any time during the class to ask a question of the instructor. When no one is talking over the satellite link from that site, the system is idle and is not using satellite capacity. As a result, ODU is using less than one MHz of space segment to connect all its remote classrooms all the time on the voice return network.

Underlying the network is a complex call management system designed by X-Analog. The system converts analog voice signals to IP data and manages IP traffic from the remote sites, ensuring call prioritization and minimizing satellite latency.

Figure 4.

"The VoIP network enables ODU to minimize the amount of traffic on the satellite network and keeps costs and usage of space segment low," says Mack Sanjak, director of engineering at X-Analog. "In addition, the iDirect platform minimizes latency. That's especially important because students have a minimal amount of time to get their questions in before the instructor has moved on to something else."

"ODU can build virtual communication environments independent of geographical limitations," says Timothy Ehrlich, director of the university's distance satellite network. "Our students can interact more easily with their instructors and with students across the country."

EXPANDING VIDEO OUTPUT AND QUALITY

With the VoIP satellite intercom system in place, ODU turned to the second phase of its system transformation: integrating video onto the satellite network. By lever-aging the flexibility of the H.264/MPEG-4 part 10 encoding protocol, ODU designed and deployed an encoding system capable of encoding video for distribution via the IP satellite network, terrestrial video streaming, podcasting, and digital asset management. The H.264 encoding system and video streaming infrastructure was developed through a partnership between ODU Distance Learning and the Office of Computing and Computational Services with support from investment funds awarded to the university from Governor Kaine's Productivity Investment Fund, a fund managed by Virginia's Secretary of Technology, Aneesh Chopra, established to promote cost savings in government agencies.

Leveraging the outbound satellite channel, ODU, iDirect, and X-Analog developed a system by which ODU can multicast up to eight live video channels simultaneously. iDirect's remote routers connect to set-top boxes integrated into the network and deliver quality live video to students with high reliability.

The enhanced capability enables ODU to increase its broadcasting capacity, while using the same amount of satellite bandwidth capacity. The network achieves this jump in efficiency by encoding the video content into H.264/MPEG-4 part 10 for broadcast, a highly efficient video encoding standard designed especially for IP networks. ODU has also been able to increase video quality and resolution to support large plasma and LCD displays. By leveraging the simulcast nature of the satellite network, new remote sites can be added without requiring additional satellite space.

A NEXT-GENERATION LEARNING ENVIRONMENT

With the satellite network multicasting H.264 encoded video, ODU can now digitally encode and archive lectures and make them available online. The MPEG-4 archives represent a valuable learning tool for students who have missed a class or who want to review the lecture, especially before an exam. Students can download the lectures for a variety of platforms, from desktop computers to mobile communications devices such as cell phones and iPods.

ODU views the new satellite network as a model for distance education. According to Ehrlich, "We are using our satellite capacity for new and exciting applications that were not possible before. This is an exciting time for our university, as we can affordably expand our reach and deliver an ODU education to more students in the U.S. and around the world."

Ehrlich adds, "We are creating new learning environments to respond to main campus and remote learning demands to meet the changing needs of today's students."

The Remote Classroom
- 15% of ODU's students attend classes remotely

Virtual Campus Includes:
- 50 remote sites and 200 classrooms spanning nationwide
- Navy ships deployed abroad

Technology Specs
- Redundant iDirect satellite hubs
- iDirect satellite modems
- Satellite space on Galaxy 26
- X-Analog designed

Call Setup Units
- Quintum 24 port ATA
- Envivio MPEG-4 encoder
- Amino AmiNET 125 Set Top Box

"WE ARE CREATING NEW LEARNING ENVIRONMENTS TO RESPOND TO MAIN CAMPUS AND REMOTE LEARNING DEMANDS TO MEET THE CHANGING NEEDS OF TODAY'S STUDENTS."

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Success in Online Education
Creating a Roadmap for Student Success

Gordon Drummond

essions Online Schools of Art and Design (known to the school's 2,000 students as "Sessions") is an unexpected but instructive success story in online education. Founded in 1997 in the bedroom of a graphic designer's New York apartment, Sessions has grown in 10 years from an intriguing Web site offering a handful of courses into a profitable nationally and regionally accredited school offering literally hundreds of courses and certificate programs in the visual arts. If you want to prepare for a career in graphic design, Web design, multimedia, or game art—or even develop your skill in fine arts like drawing or painting—Sessions aims to be the most cost-effective, creatively challenging course or certificate program in your Google search.

Why did Sessions survive when many pioneers in online education fell by the wayside? What makes the school's programs one of the most successful art or design programs offered online? How does the school create a roadmap for student success? The following article attempts to answer those questions by sharing some insights gained in 10 years of operation as an online school. This article can be helpful not just to online arts educators but also to anyone developing educational programs for delivery over the Internet.

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IN SEARCH OF CORE PRINCIPLES

What are the core principles for success in online education? Let's begin by examining two of the usual suspects: technology and interactivity.

Since the late 1990s, e-learning gurus have been obsessed with the importance of creating courses using cutting-edge technology and making courses as interactive as possible. One early Internet company that epitomized this approach was Fathom. Fathom was an innovative private company that partnered with a constellation of august institutions including Columbia University, University of Chicago, and the British Museum to deliver an Ivy-quality liberal arts education online to a global audience.

Fathom's instructional designers commanded six-figure development budgets

to create each course, which they used to embed university lectures with extravagant multimedia tools. Picture a history course stocked with Flash movies illustrating the voyage of Columbus or Napoleon's march on Moscow, and you'll get the idea. The technology was cutting-edge, a small fortune was spent on interactivity, and yet Fathom closed its doors in 2002.

What went wrong? There were many factors in Fathom's demise, including low consumer demand for liberal arts courses and a funding crisis caused by the dot-com crash. One lesson I would draw is that technology and interactivity are less important than designing a learning experience that has all the traditional components of a successful course:

- an expert course developer/instructor who knows how to teach;
- well-defined, meaningful learning objectives;
- a clear, well-structured, and engaging presentation of concepts or techniques;
- an approach that emphasizes cumulative, hands-on development of skills;
- a philosophy that connects the classroom learning experience to real-world goals and aspirations;
- an assessment method that enables an instructor to measure student achievement of learning objectives;
- a culture and environment that maximizes student-instructor and student-student feedback and interaction.

These are the core principles that we use at Sessions to make sure our courses are effective for our students. On the surface, none of them are by themselves startlingly new or original, nor do they depend on the use of cutting-edge technology or interactive features. And yet, they are essential to learning, and to be frank, they are difficult for many schools to achieve in an online environment.

It's not hard to see why educators go astray online. Even today, when an institu-tion or a school department is developing online courses, the process tends to focus on how to make content exciting for Web users. This can result in adapting preexisting content for the Web, and focusing effort on working with external developers or instructional designers to make content more *interactive*. The theory is that online courses should not be *page-turners*; online courses need to be overflowing with rich media assets in order to sustain the interest and attention of students accustomed to increasingly sophisticated online experiences where the world outside the classroom is always one click away.

At Sessions, we've found that focusing on the fundamentals of a successful learning experience is more important than implementing cool technology or interactivity per se. So my advice to my fellow chief learning officers and online education directors is this: forget that streaming-media-Flash-video-XML application your technology team is so excited about. The medium is not the message. Instead, focus on working with your faculty to create great courses. If you're not doing so already, you can begin by working with the following principles:

1. IN ANY COURSE, THE INSTRUCTOR IS INGREDIENT #1

Sound obvious? If so, you're in select company. In my view, too many online schools treat faculty as an afterthought to learning, brought in to support some preexisting curriculum plan supported by textbooks or an assembly of poorly integrated online content created by anonymous authors. The Sessions standpoint is this: the most effective learning experiences are human-to-human. We believe our students will learn better if they study with an instructor whose expertise, personality, and presentational style all combine to create an engaging experience.

Achieving this goal takes effort. First, we try to recruit faculty members who are not

only experts in their specific field but also passionate communicators with a track record in arts education or publishing. Second, our instructional design team works with each faculty member to create a highly personal, individualized course product. No textbooks are required—every lecture, exercise, graphic, animation, and video in the course is uniquely developed for online delivery in an engaging, personal style. You're one-on-one with your instructor, whom you can contact at any time and who will be individually grading all your course assignments.

2. EVEN THE BEST INSTRUCTORS NEED TEACHER TRAINING

As I write this, I imagine department heads bobbing in agreement. Let's face it—in traditional education, faculty members are often resistant to feedback on their approach to teaching. This problem is magnified online. Not only does online communication present some unique challenges, but accepted standards for effective online teaching are still emerging, and schools are unsure of how to train, monitor, or evaluate teaching that occurs in a virtual environment. In this context, students are poorly served by a belief that teacher knows best.

Our philosophy is that teacher-student communication is so essential to the learning experience that we needed to develop our own mandatory best practices teacher training course for all instructors. Since the core task for instructors at Sessions is to critique creative student artwork posted online, our teacher training course focuses on techniques for constructive criticism, including benchmarks, mentoring, encouragement, and identification of strengths and weaknesses. Equally important, these teaching standards are reinforced in biannual performance reviews in which administrators evaluate teaching samples and student-instructor exchanges.

3. MAKE COURSE OBJECTIVES MEANINGFUL

Here's a principle honored more in the breach than the observance. Most online educators agree that course objectives and needs analysis are important prerequisites to course development, but how often is this admittedly tedious process followed? It's a common trap in developing any course (online or off) to focus 90% of your effort on preparing a presentation of content that you feel a course must cover, leaving 10% of your energy for figuring out exactly what students will need to do to develop their skills and demonstrate what they have learned.

At Sessions, we try to reverse that equation. Working with our faculty members, we use a formal course outline process to identify what skills we want students to attain and plan course exercises that challenge students to demonstrate mastery of those concepts. The focus is on designing exercises that are creative and exciting and mirror real-world art and design scenarios—projects that we'd love to do. Once those objectives and assessments are established, faculty members can concentrate on developing course lectures that prepare students to meet those challenges.

4. DEVELOP A KILLER PRESENTATION

It's true that in any online educational environment, the perils and delights of YouTube are but a mouse click away. This means that online course content must engage the student with a clear, well-structured, and engaging presentation of concepts or techniques. This does not mean that the delivery of course content needs to be blazingly interactive or high-tech. It does mean that course content should be a well-organized and professionally edited presentation of information supporting by clear illustrations and animations or audio/video support if necessary and possible. In order to meet these course development goals, Sessions uses a team of instructional

designers that collaborates with faculty members on every aspect of course development: planning, developing, testing, QA, editing, graphics/media, and proofing.

It's unrealistic to expect even the most talented course developer to be an excellent writer/editor *and* graphic designer *and* audio/video editor. So our instructional design team works with each faculty member to supplement his or her strengths and create a multidimensional product. Consistent high standards of quality are only possible through a multiphase development process in which every aspect of the product is tested by a team that has cross-disciplinary expertise in instructional design, editing, graphic design, Web standards, and audio/video editing.

5. LEARN BY SEEING AND DOING

If you cast your mind back to Fathom, the company discussed at the beginning of this article, you'll recall that the company (according to e-learning industry articles at the time) spent hundreds of thousands of dollars embedding Flash-based multimedia in its courses. This multimedia strategy was the favorite of instructional designers and Flash developers alike, since every article on e-learning at the time preached the importance of rich media sizzle and interactivity. The problem with this approach is that people actually learn most effectively through not only reading and viewing content, but also through an active learning process that engages what Bloom's taxonomy calls their cognitive, affective, and psychomotor skills.

At Sessions, our goal is to teach students practical art and design skills. In our courses, students learn everything from how to correct colors in Photoshop to how to animate characters or mix watercolors. This type of education is only possible because the course content is designed to promote hands-on learning. In developing and delivering each course, faculty members are constantly looking for ways to not only explain art and design techniques, but also to find ways for students to explore and experience those techniques for themselves as they learn. An active learning experience is one in which an instructor is constantly explaining "here's how it's done ..." and inviting you to develop skills "… now you try it."

6. PREPARE STUDENTS FOR THE REAL WORLD

Our nation's K-12 and college educators are empowered to explore a wonderfully broad intellectual universe in their curriculum. Teachers can approach subjects like differential calculus or late Romantic poetry divorced from any obvious practical "real-world" application of skills learned. Postsecondary schools that deliver a technical or career-focused education to adults have no such luxury. Instead, they are charged with bridging the gap between the classroom and the workplace, by imparting a knowledge of professional practices and standards.

We try to address this challenge at Sessions, as any school should, by making sure our faculty and advisory board members maintain a constant connection to current practices in the professional world. Because our faculty teach on a part-time schedule, we are able to meet our goal of recruiting instructors and course developers who include published authors, professional photographers, architects, illustrators, design agency directors, and Adobe-certified trainers.

Equally important, we use input from external advisory boards to keep informed about changing expectations of employers in the industry. Feedback about what employers are looking for can be extremely useful in helping us plan and develop program outcomes, particularly if that information is provided by external experts who are not influenced by the constraints and demands of teaching.

7. Put Students Through Their Paces

From time to time, I meet people who don't understand art education and wonder how art or design can be taught online. Setting aside the larger question of how art education works, the question about how to successfully teach online can be answered quite simply: put students through their paces. If you need to determine whether an online student has mastered a specific concept or skill at a satisfactory level, you need to design the appropriate assessment. Your challenge is to develop an exercise that by its very nature forces students to demonstrate the attainment of knowledge or technique.

Our approach (our challenge) in developing assessments at Sessions is to try to give students projects that replicate the scenarios that designers and artists face in a professional environment. When a professional graphic designer gets a project from a business client, he or she works within constraints. The goal of the job is not unfettered self-expression, it's to develop a polished creative solution to a business problem, often working with pre-existing materials or guidelines. To become a professional graphic designer, you need to develop technical, creative/visual, and business/communication skills, and we try to design course projects to help students concurrently address the different cognitive areas that they need to develop.

It's also important to note that course projects at Sessions are designed to be creatively challenging and approached in different ways, so that each student can develop his or her own approach to assignments. Students who approach classes diligently and creatively—and take advantage of instructor feedback—are able to build a body of creative work as they move through the program. It's essential that arts educators give students significant challenges to overcome in school. Students need to be comfortable tackling compli-cated projects in academia if they are to meet the challenges in the professional world.

8. Promote (Ignite) Communication

One final thought for online educators is that any online course or program must be delivered in a culture and learning environment that promotes student-instructor and student-student feedback and interaction. The main distinction between online education and its traditional classroom-based counterpart is simply the communication tools used. The Internet revolution has provided us with a magnificent set of widely understood tools for communicating anything to groups or individuals. And so one of the most important things an online school, course, or instructor can do is simply set up the structure and the easy to use tools for communication between instructors and students.

At Sessions, we try to promote communication in various ways. One way is by structuring the majority of student-instructor communication around the evaluation of student work, rather than mandating student chats or discussion forum activity as many schools do. Another forum for communication is the DesignSessions online student community, in which students can create profiles, upload portfolios of work, post on discussion boards, create friend networks, and participate in faculty-led clubs. The community provides important peer and professional networking opportunities outside class, and Sessions looks to take this approach one step further in 2009 with an ambitious plan to integrate Web 2.0 community features into its learning management system. The school's search for better ways to teach and learn online is far from over; we need to always keep pace with the evolution of online communication in general.

CONCLUSION

In this article I've discussed some principles for developing effective educational programs online. While the concepts are based on some unique challenges faced by program directors and instructional designers at Sessions Online Schools of Art and Design, I believe they can be helpful to other institutions growing their online programs or indeed delivering any kind of distance education. Unlike many other pioneers in online education, Sessions has been able to survive and prosper as a school because it has focused on delivering the elements of effective education: great instructors, meaningful objectives, effective teaching, hands-on learning, real-world education, rigorous assessments, and communication tools that facilitate learning. Hitting the mark in each of those categories can certainly be a challenge for any institution, but schools who measure up will create a roadmap for student success.

The Tangled Web(s) We Weave

Internet2 and the Net Neutrality Debate

Matthew Putz

INTRODUCTION

In the winter of 2006, Gary Bachula, vice present of Internet2, made the following statement before the U.S. Senate Committee on Commerce, Science, and Transportation: "With respect to the issue of net neutrality, some have said that the future of the Internet is at stake. We in Internet2 would agree, but might go further. The future of American innovation and competitiveness is also at stake. To compete in the world, we need a simple, inexpensive, and open network, not a

costly, complex, and balkanized one" (Internet2, 2008). In response to Bachula's address and his organization's position, this article will provide an overview of Internet2, especially as it relates to the so-called "net neutrality" debate currently raging in the United States. It will reveal several flaws in Bachula's well-intentioned address. And it will suggest a way forward in this conversation that honors the unique networking needs of the educational community, the financial considerations of the telecom companies that control the vast majority of the wired "pipes" that connect what is known as the "Commodity Internet" (or, simply, the Internet), and the public good.

WHAT IS INTERNET2?

In 1996, 34 researchers representing a similar number of universities gathered together to "reinvent" the Internet. Going back to the 1960s and 1970s, what has now become known as the Internet began as a group of networked schools and scholars who had found an electronic medium with which to exchange ideas and information. Eventually, that network expanded to everyday telephone lines through the telecommunications industry, and the Internet as we know it today was born. These 34 researchers were hoping, in part, to recapture the spirit of those early days with a newer, faster, and, perhaps most impor-

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tantly, more private network that would be committed to education and research, out of the reach of most of the commercial interests that many believe now dominate the Internet.

Over the past 12 years, that early gathering has grown into a major nonprofit organization, now known as Internet2, that manages a nationwide fiber-optics network with over 200 university members and many corporate and affiliate members (Internet2, 2008). Internet2 represents a significant network backbone that provides high-speed data access to a group of scholars and students numbering in the millions, and in many ways it is attempting to keep an educational dream alive, the dream that scholars and students should have unfettered and open access to one another's knowledge.

WHAT IS "NET NEUTRALITY?"

All of that, however, does not serve to explain Bachula's address before the Senate committee. The concept of "net neutrality" is relatively new, as are many developments having to do with the Internet. Unlike telephone networks, which are directly controlled by centralized switches, the Internet was designed to be "controlled" from the edges of the network, by the users and their servers at the endpoints. This provides a great degree of flexibility for end users, and it is easy to make the assumption that the telecom and cable companies controlling the connecting wires and switches will simply allow traffic to proceed along the network in a Darwinian manner, with data packets simply going wherever they need to as speedily as possible. It seems simple.

But it isn't simple. That's because those companies charge fees for their services and because their wires are limited with regard to the amount of data they can carry at one time. And whenever supply is limited in a relatively free market, there is a potential (some might say an obligation)

for prices to go up. Communications companies have charged different prices for different Internet access speeds for years. Since it is bandwidth that is being bought and sold, rather than a generic sort of access to the network, and since some customers have the ability to pay more than others, then there is also the potential that those companies might begin to favor clients who have the ability to pay a premium for their Internet service. To free-market economists, it sounds like good business. To those who are more doctrinaire with regard to keeping information as free as possible and avoiding a tiered approach to charging entities for packets they send out over the Internet, however, it sounds like a distant, creaking door about to latch shut.

Net neutrality is the term given to the notion that companies that provide Internet services should not be allowed to give preferential treatment to any type of information on their networks. Bachula represents an organization that agrees with this position. He made his statement to the Senate committee in order to show support for an early version of net neutrality legislation, and while this article takes no position on net neutrality itself, it does call much of his stated reasoning into question.

FLAW: YOU COULD BE JUST LIKE US IF YOU REALLY WANTED TO

Bachula's line of reasoning in arguing for net neutrality has three basic flaws. First, Bachula said, "Our mission is to advance the state of the Internet, and we do that primarily by operating for our members a very advanced, private, ultra-high-speed research and education network called Abilene that enables millions of researchers, faculty, students and staff to 'live in the future' of advanced broadband" (Internet2, 2008). This statement sounds innocuous enough on its face, but it is an example of a fallacy that permeates Bachula's entire presentation. In essence,

what is being said is that Internet2 has the potential to be a sort of model for the "Internet of the future" from a networking standpoint. This could be called the "you could be just like us if you really wanted to" argument, and it simply isn't true. There are two related words in this statement that throttle this claim: "members" and "private." Internet2 does not replicate a real, public Internet environment; contextually, it is simply not the same as the Internet. Internet2 is a specialized, closed, highly controlled system; in this sense, it is the opposite of the Internet. Comparing Internet2 to "the Internet of the future" is like comparing the space shuttle to the "airliner of the future." Extending the philosophy of networking services Internet2 provides to the general public (which is the sort of thing Bachula is advocating) would destroy the environment within which much of the Internet2 advantages are nurtured. Internet2 is not (and never will be) "open" in the sense that openness is being advocated for the Commodity Internet.

Bachula also said, "If a network operator starts to give preference to packets from one source (possibly a premium subscriber that is paying for that preference), what happens to all of the other, ordinary packets?" Later, he said, "Today our Abilene network does not give preferential treatment to anyone's bits, but our users routinely experiment with streaming HDTV, hold thousands of high quality two-way video conferences simultaneously, and transfer huge files of scientific data around the globe without loss of packets" (Internet2, 2008). This is all true in a limited sense. It would be more accurate, however, to say that Internet2 does not discriminate for or against certain types of packets based on content or source *once those packets are allowed on the network in the first place*. Bachula is criticizing a potential move by major communications companies to discriminate for or against certain sorts of Internet traffic based on content or source, but it is important to remember that

Internet2 discriminates in exactly this same way by allowing only members to use its network. So packets are discriminated for and against through the vetting of members. It's undeniable that companies like Google and Microsoft would love to have the same access to the Abilene network that they do to the Commodity Internet, but they don't and they won't. In effect, their packets are being discriminated against, and this is one of the reasons Internet2 is able to maintain a certain level of quality.

The hard truth is that at some point, quality demands that network operators either have to police who gets on the network or what gets on the network. (Bachula takes a somewhat different position, opting for a "bigger pipe" strategy, which will be discussed later.) Internet2 opts generally for "who," assuming that the majority of the traffic the correct "who" creates will be legitimate. So Internet2 filters packets in a broad sense by vetting users. The Commodity Internet (with its plans for tiered pricing) opts for "what," validly understanding that it simply does not pay from a financial standpoint to police "who." Communications companies want as many customers as possible, and they might filter packets directly. So both the manner in which Internet2 operates and the manner in which some communication companies would like to operate (a tiered system) involve placing limits on the system in order to favor some packets over others. The bottom line is that Internet2 is simply not comparable to the Commodity Internet with reference to "openness," and is therefore not as good a model for the Internet as may be imagined.

FLAW: WE ARE NOTHING LIKE YOU

The second flaw in Bachula's statement could be called the "we are nothing like you" argument. Bachula said, "if economic toll booths are allowed for content and applications to access the Internet, then

soon only the richest content providers will be able to make their material available. What happens to the little guy, the start-up, the entrepreneur?" (Internet2, 2008). It's interesting that Internet2, a private network, is calling for open access to someone else's network "for the public good," when it is demonstrable that Internet2 is not providing its own service to "the least of these," even when it might also serve the public good. In doing so, Interent2 is being painted as something very different from "big business," concerned about "the little guy" and altruistic notions of access to information and such. This is an interesting tactic, because by making the argument this way, Internet2 can lay claim to these high-minded visions of an open Internet on the one hand, and at the same time have the privilege of operating a highly priced members-only high-speed network that even most schools in the US do not have direct access to. (Most schools must use the Commodity Internet to access Internet2.)

Internet2 could rightly be labeled as the higher-education-equivalent of big business. Its members are generally large universities with large budgets taking in a large amount of money for their research projects, and they are able to charge high tuition rates at least partly because of the advantages that come from having this sort of "network access." It would probably be less disingenuous to state that everyone in this argument is simply following their own interests. In fact, Internet2 has a vested interest in keeping the Internet as free from tiered pricing as possible, since many of the "little guys" in the educational world use standard Internet connections to gain access to the Internet2 system. Without relatively unfettered access of this sort, the Internet2 "superhighway" (which runs between a very few, very well-funded schools) would be even more isolated than it currently is (see Figure 1).

Internet2 does not represent "the little guy" any more than Qwest does. If it did, Linton High School in southern North

Figure 1.

Dakota would have direct, fiber-optic access to Internet2, or at least be part of the strategic plan. The argument that Internet2 makes to "big business" here ("we are nothing like you guys") isn't really true. When it comes to the desire to control network traffic for the purposes of maintaining corporate values, Internet2 is very similar to many North American communications companies in that both have reasons to want to deeply control their networks, and both have significant financial reasons for doing so.

FLAW: BANDWIDTH IS THE BEST SOLUTION

Finally, in arguing against a tiered approach to providing Internet service, Bachula said,

> For a number of years, we seriously explored various '"quality of service" schemes, including having our engineers convene a Quality of Service [QOS] Working Group. All of our research and practical experience supported the conclusion that it was far more cost effective to simply provide more bandwidth.… We would argue that rather than introduce additional complexity into the network fabric, and additional costs to implement these prioritizing techniques, the telecom providers should focus on providing Americans with an abundance of bandwidth—and the quality problems will take care of themselves. (Internet2, 2008).

This statement can be summarized as follows: the only way to maintain a cost-effective QOS is to have so much surplus bandwidth that it just doesn't matter what is being transmitted on the network. This is difficult to argue with. The real question, however, is whether or not it is workable on a large scale. That is not to say that the members of Internet2 shouldn't be allowed to do this with their own network, a network that is private and highly restricted. But that logic doesn't necessarily make

sense in the "public Internet" world. Bandwidth continues to fill up whenever people are allowed to freely use it, and it would be difficult to demonstrate how this would not continue to happen as people find new ways to use the available bandwidth. This argument is naïve, not just because it ignores the fact that there has never been "too much bandwidth" in the history of the modern, public Internet (and therefore no reliable test case), but because it ignores the fact that the primary reason Internet2 has more bandwidth than it really needs at the moment is not because it runs such a speedy network, but because so few people (relatively speaking) are actually using it. Available bandwidth is a relative idea based on the needs foisted upon the current network.

In summary, Internet2 is saying they're just like the Internet when it comes to networking potential ("you should design your network like we did") and they're saying that they're nothing like big business when it comes to their own interests ("you should serve the common people"). In reality, the opposite is true in both cases. Internet2 is the opposite of the Internet with regard to networking for many reasons, and the Internet2 members are predominantly the big business of higher education. Add to that a questionable technical philosophy (the "with enough bandwidth there are no reliability issues" notion), and we have an argument that just doesn't work.

NET NEUTRALITY SANITY

Does this mean that net neutrality is a bad idea, that Internet2 is the devil in disguise, or that communications companies are looking for opportunities to give their profits away? Of course not. It simply means that this discussion needs to be approached from the perspective of a multiplicity of interests. Here is a way to think about net neutrality that doesn't imagine demons behind every rock.

First, communications companies need to be able to stay in business for the good of the Internet. Staying in business means making money. This helps the Internet in at least three ways. First, it keeps the Internet itself "in business." Second, it incentivizes companies to invest in the pipelines that increase the capacity and reliability of the Internet. Finally, it gives companies more room to flex when it comes to the potential of some government oversight. When companies are making money, it makes it possible for them to endure some regulation and still thrive. When they're not, then they can't, and people know it, which makes it less likely that positive regulation will be passed in the first place (and it seems fair to say that some is always going to be needed to protect consumers), and therefore that there will actually be less appropriate protection for consumers. So it is also to the public's advantage for communications companies to be at least somewhat profitable, if only for this reason.

The educational community has both altruistic and practical concerns with regard to the Internet. From an altruistic standpoint, it is important to many educators that information be as available as possible, so that as many people as possible can benefit from it. It's the sort of "good thing" that can't really be measured by a study. Also, the Internet actually provides a significant amount of the connectivity between scholars, institutions, and students today, and so the loss or degradation of this "pipe" for information would be a difficult thing for educational institutions to endure. Internet2 also depends on this connectivity to bridge out to the majority of the educational institutions it serves.

The public (the third group) seems to be at the mercy of the first two. Both of the above groups seem to assume that they know what "the public" wants, but at times those "wants" can be stated in mutually exclusive terms. Ultimately, the Internet is about ordinary people receiving access to information they didn't have access to before. In order to permit this access, some measure of control is required. After all, a common language (in this case, made up of common Web browser standards, IP standards, etc.) assumes a certain level of control, even if it is a mutually agreed-upon sort of control.

The question is, "Who gets to decide how control and access are balanced?" Will it eventually be up to the government? Up to this point, net neutrality laws have failed to gain adequate acceptance in Congress, often because of these competing priorities. Will net neutrality eventually become law? It might, but don't bet on Internet2's arguments to push it "over the top."

REFERENCES

Internet2. (2008a). *Network neutrality*. Retrieved April 1, 2008, from http://www.internet2.edu/presentations/2006/20060207-GaryBachula-Testimony.pdf

Internet2. (2008b). Retrieved April 1, 2008, from http://www.internet2.edu/network/participants/listParticipants.cfm

"WILL NET NEUTRALITY EVENTUALLY BECOME LAW?"

E-learning English Courses

"Inglese Smart" and "Effortless English" Distance Learning Courses

Radmila Piletic

I f you are interested in studying English and you cannot afford a study trip abroad or even just a few days off, here are some great examples of how to become a fluent English speaker, even from your own home! This article describes two online English courses: Inglese Smart e-Learning Course and Effortless English e-Learning Course.

These are Web presentations that offer online learning of the English language, but for different target groups and also with quite different methods.

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INGLESE SMART E-LEARNING APPROACH

Adam Narbutt-Ryan, author of Inglese Smart, is from England and has lived in Rome for 3 years. Narbutt-Ryan's product is available in Italian and is addressed to Italians and other Italian-language speakers. A crucial difference between Narbutt-Ryan's learning approach and the second program described in this article, Effortless English, is the fact that Narbutt-Ryan offers both online and face-to-face learning. Effortless English is totally distance learning based.

If you chose to study with Narbutt-Ryan, you can choose one of the following programs:

Grammar Courses:

- Verbs
- Grammar extra 1
- Grammar extra 2
- Modal verbs (can, could, would, must, have to, might, and may)
- Delexical verbs (do, get, give, have, keep, look, make, put, and take)

Business English Courses:

- Conversation lessons
- How to prepare for a job interview
- How to prepare CV (resume) and cover letters
- E-mail and other correspondence

Figure 1.   www.inglesesmart.com

Pronunciation and Listening Course

- Other Events
- TV & Cinema Evenings (discussions on certain films or other cultural events)

An interesting and attractive concept used in Narbutt-Ryan's learning method is flashcards or "Biglietti Smart." Well-known as a learning media/aid, flashcards included in Inglese Smart are available for each of its courses/levels. This method allows you to study wherever and whenever you want. As Narbutt-Ryan says, they are really smart! Biglietti Smart allows you to study grammar, words, verbs, phrases— whatever you want, without any limits.

Inglese Smart provides a variety of flashcards collections, depending on the specific course program. Further, you can use one of these collections: grammar col-

lection (tenses, prepositions, verbs, etc.), word collection (law, business, colloquial, marketing, etc.), and frequently used words (the first 500, 1,000, 2,000 in Italian and English languages). Some of the flashcard collections have more than 2,000 cards. Most students create a personal method of using the flashcards.

Another useful learning tool that both programs offer is "e-mail-a-day." Users can subscribe to the e-mail-a-day program and receive lessons on various topics.

THE EFFORTLESS ENGLISH E-LEARNING APPROACH

A. J. Hoge is director of Effortless English. Hoge's instructional approach is distance learning based. At the very beginning of his online study trip, Hoge asks you to
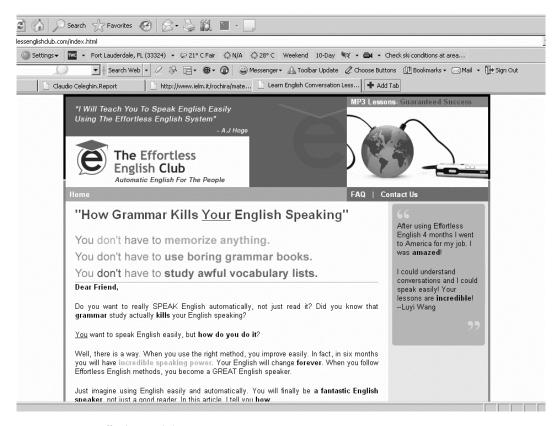
Figure 2.   www.effortlessenglish.com

choose what you want to learn. You can select one of these goals:

- Speak English Easily and Fluent
- Understand English Automatically
- Use Correct Grammar When Speaking
- Improve Pronunciation
- Go to School in Another Country
- Get a Better Job Using English
- Make International Friends
- Understand English TV and Movies
- Feel Relaxed When Speaking

Once enrolled in the Effortless English distance learning program, you will receive an e-mail from Hoge each day. Your e-mail course will start with the first-day topic, which explains how you can understand instantly and learn four times faster. You will be sent one e-mail for each of the following 8 days. Every e-mail will contain a rule. The eight rules are:

1. Always study and review phrases, not individual words;
2. Don't study grammar;
3. A story;
4. Slow, deep learning is best;
5. Use point of view ministories;
6. Only use real English lessons & materials;
7. Listen and answer, not listen and repeat; and
8. How to improve your pronunciation.

Each of Hoge's lessons includes an audio file. With these files, you can choose where, when, and how you will practice and improve your English.

If you need to learn more about language or you just want to feel more confident using what you've already gained, I hope these two examples are sufficient to convince you to select the e-learning method.

Learning Management Systems

A Focus on the Learner

Mildred Roqueta

INTRODUCTION

Your institution is considering a change in its learning system. As a leader, practitioner, and/or decision maker, you are called on to be part of the decision-making and implementation processes. What do you need to know in order to recommend the best system for your institution and its learners? This article will provide a comparison between two types of learning systems and will recommend one over the other based on its suitability according to Moore's (1993) transactional distance theory.

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DESCRIPTION OF LEARNING SYSTEMS

A learning system is a type of tool used to manage the knowledge assets of an institution and make them available to learners (Graf, 2008). Learning systems are used to manage courses, deliver content to learners, conduct learning activities, and evaluate learning outcomes. The learning systems software used to deliver online, hybrid, and Web-supported courses are known by many different names. They have been called courseware, course management systems, learning management systems, learning content management systems, and virtual learning environments, among others. In this paper, for ease of reference, they are referred to as "learning systems." They all fall under the general classification of tools for the management of information and learning (Graf, 2008). Until recently, course management systems (CMSs) like WebCT were the norm. They allowed institutions to focus on creating courses and populating them with content and students. More recently, however, a new type of system has emerged called learning management systems (LMSs) because they are designed with the learner in mind and promote a focus on the learner in addition to the content.

Should you recommend the institution consider a CMS, or an LMS? How, exactly, are they different? What are the benefits of licensing a newer-generation LMS rather than a CMS like WebCT? WebCT is a great tool for the management and delivery of

course content. At this author's institution, however, we recently transitioned from the WebCT CMS to a new LMS known as ANGEL (ANGEL Learning, 2007). Why did we change from a CMS to an LMS? Simply put, we were looking for two things: a scalable enterprise-level portal system capable of interacting with our student systems, and a system that had better learning management tools.

This paper explores the differences between CMSs and LMSs and suggests the clear advantage of an LMS if your institution and faculty desire the best type of system for the learner. Two theories that relate to this choice are examined in this paper: transactional distance theory (Moore, 1993), and diffusion of innovations theory (Rogers, 2003). A theoretical model for the evaluation of learning systems (Malikowski, Thompson, & Theis, 2007) is also reviewed and discussed. Suggestions for evaluation and implementation are also offered based on our experience transitioning from a CMS to an LMS. Also suggested is the importance of training faculty during the implementation in order to speed the process of diffusion of the innovation throughout the system.

LEARNING SYSTEMS USAGE

Learning systems have become the core technology used by institutions that deliver courses at a distance, and they are also widely used by institutions for hybrid courses and for other blended learning environments (Black, Beck, Dawson, Jinks, & DiPietro, 2007). But more than any other delivery model, learning systems are used by instructors who choose to enhance their traditional classes with online content or who wish to take advantage of the communications tools in those systems. Indeed, learning systems are used three times more often for technology-enhanced traditional courses than for hybrid and online courses (Falvo & Johnson, 2005; Green, 2001; Morgan, 2003). Irrespective of the course model, millions of students are using learn-

ing systems in higher education and a growing number of K-12 students have been exposed to these systems. As a result, a focus on the learner is appropriate.

COMPARISON BETWEEN COURSE AND LEARNING MANAGEMENT SYSTEMS

CORE COMPONENTS OF A CMS/LMS

Most learning systems include a set of the following core components: course management tools (syllabus, calendar, drop boxes, announcements), content tools (content pages, quizzes, assessments), and communication tools (asynchronous e-mail, discussion forums, chat), all of which allow instructors to provide content and learning activities, test learning, receive assignments, and conduct discussions and other course-related activities in a principally asynchronous online environment (Simonson, Smaldino, Albright, & Zvacek, 2006). Learning management tools have become an important option for course delivery in higher education since they were introduced. Indeed, Simonson and his coauthors (2006) refer to them as the "de facto standard by which the majority of asynchronous distance education courses are delivered, particularly in higher education" (p. 240).

DIFFERENCES BETWEEN A CMS AND AN LMS

According to Simonson and his colleagues (2006), CMSs were introduced in the 1990s and later evolved into LMSs. They report that CMSs are often mistakenly identified as LMSs. The major difference between them, according to the authors, is that a CMS is focused on "the delivery of courses" while an LMS is focused on "an individual and tracks the learning needs and outcomes achievement of that person" (p. 240). Smaldino, Russell, Heinich, and Molenda (2006) add that the needs generated by the "standards move-

ment" in education has brought about the evolution of CMSs to LMSs, which are now capable of tracking the achievement of individual students against state standards and outcomes and are being used in K-12 and higher education for that purpose. Ceraulo (2005) maintains that an LMS is superior for "its emphasis on learning management rather than course management, its ability to store educational content so that it can be referenced by many courses, and its ability to streamline a distance or elearning instructor's tasks" (p. 7).

GROWTH AND CONTRIBUTIONS OF CONTENT AND LEARNING MANAGEMENT SYSTEMS

According to Carmean and Haefner (2002), since their inception 30 years ago, CMSs and their newer counterparts, LMSs, have been swiftly adopted and enthusiastically embraced. They stated that the swift adoption of these systems is remarkable given that the academy is slow to change and to adopt new systems. They concluded that the "enthusiastic embrace" of these systems by faculty and students makes it evident that they are meeting an important need. Their conclusion has been supported by recent studies that asked students how they felt about these systems. For instance, in a study of 18,039 students who replied to a 2004 survey, Kvavik and Caruso (2005) reported that 75.2% of the students had positive or very positive feelings about the system. The fact that so many students are using these systems made it inevitable that the focus of these systems would shift to the learner.

A FOCUS ON THE LEARNER

THE LEARNING DIFFERENCE: BENEFITS OF AN LMS

While CMSs are adequate for adding and delivering content, the LMS clearly outshines them on its focus on the learner. If your institution wants a system that promotes a focus on a quality experience for the learner, then you probably want an LMS. For instance, WebCT does a fine job of organizing and managing content, and their communication tools are good and easy to use. However, the ANGEL LMS is a clear winner when it comes to focusing on the learner. In ANGEL, you can program "agents" (ANGEL Learning, 2007) to scour the course and return data on which you can take action. For example, you can create an agent that determines who is missing an assignment and automatically sends them a reminder e-mail. You can program an agent that determines who has completed assignments and sends them a congratulatory e-mail. You can program steps ahead of time so that content is unfolded as the individual learner achieves mastery of previous content. You can monitor student logins and send reminders to their external e-mail accounts. In short, you can take action before events occur (or after) and can increase interactivity between you and the learner. All it takes is a bit of planning and forethought and the system can deliver the type of interaction and focus on the individual student that is not possible with CMSs.

THE FUTURE OF LEARNING SYSTEMS

Morgan (2003) maintains that the structure of a CMS/LMS has the potential to allow the academy to adapt their teaching to the needs and learning styles of each individual learner. It is evident that experienced online instructors can do remarkable things with any system. Like Clark (1991) said, it is the instruction, not the method that matters. Indeed, many instructors who use these systems are what Lowes (2008) calls "mental migrants" and "trans-classroom teachers" (p. 1) because they teach in both traditional and online formats and use strategies from each to inform their teaching. However, instructors who teach online courses at our institution have long voiced a concern that

teaching online is more time-consuming and rigorous than teaching face to face. The newer LMSs allow faculty to automate some of the processes so that a lot of the work is done up front. The interaction takes place constantly throughout the term and each learner receives immediate individual feedback as he or she progresses through the content and activities. At present, that kind of interaction is not possible in a CMS unless faculty spend an inordinate amount of time reviewing each student's work on a daily basis. If the instructor is teaching several courses at the same time and the class sizes are large (there are 28-30 students in online courses at our institution), the instructor would be hard-pressed to have the time to do that.

THEORETICAL SUPPORT FOR AN LMS

MOORE'S TRANSACTIONAL DISTANCE THEORY

Moore's (1993) theory of transactional distance provides a theoretical foundation for the benefits of an LMS over a CMS. Moore proposed that that "the physical separation [in online courses] … leads to a psychological and communications gap, a space of potential misunderstanding between the inputs of instructor and those of the learner" (Moore, 1991, Transactional Distance, ¶ 2). Moore called that gap "transactional distance." Central to Moore's theory is the idea that we must reduce the distance that students perceive between themselves and their tutors in online courses. Moore believes that two variables play a role in bridging that distance: *dialogue* and *structure*. The higher the level of dialogue, the less distance the learner feels, whereas the more structure there is the more distant the learner feels.

According to Moore, dialogue is the "interaction between the teacher and learner when one gives instruction and the other responds" (1991, Transactional Distance section, ¶ 5). Structure is an aspect of the rigidity or flexibility of the objectives, teaching strategies, and evaluation methods. Structure "describes the extent to which an education program can accommodate or be responsive to each learner's individual needs" (1991, Transactional Distance section, ¶ 6). Transactional distance is lessened in courses with high levels of dialogue and little predetermined structure because learners receive ongoing guidance from instructors and are able to modify instructional materials to meet their needs (Moore & Kearsley, 1996). It follows, then, that using an LMS like ANGEL to increase dialogue in the course via a series of automated agents that constantly give feedback to the learner would increase dialogue and reduce transactional distance. Moreover, using an LMS like ANGEL to allow for more individual learning needs like allowing students to progress at their own pace, would reduce structure and thus also reduce transactional distance. Figure 1 depicts the relationship between dialog and structure according to Moore (2007).

TRAINING

IMPORTANCE OF TRAINING

Learning management systems are here to stay and investing in training the faculty to use them to their fullest advantage seems, to this author, like a good investment. Morgan concurs they are a good investment given the "knowledge driven-era" (p. 84) we are living in. Many believe that the Net Generation learns by doing (McNeely, 2005), but it must be remembered that they have a low tolerance for frustration and are used to instant access and quick responses (Oblinger & Oblinger, 2005). Therefore, taking advantage of the increased interactivity possible with an LMS can also be seen as a way to increase interaction and prevent frustration.

THE NEED FOR TRAINING

While learning systems have become ubiquitous, training on their use is critically important to the success of an imple-
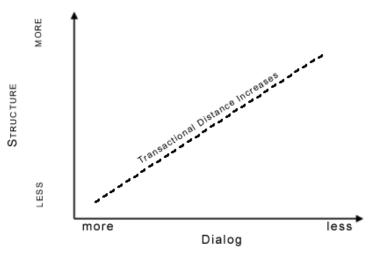
Figure 1. Relationship of structure, dialog, and transactional distance.

mentation. Instructors who have delivered courses in a content management system will need a considerable amount of training before they are ready for the pedagogical demands of a learning management system. The focus on the learner could be an enormous paradigm shift for the instructor used to focusing on the content of the course, not necessarily on the learner's experience as they interact with the course. The training that should be offered is not just on how to operate the new system, but on how to program instructional milestones and agent technology to take advantage of these learner-centered systems.

EVALUATION AND IMPLEMENTATION

A MODEL FOR EVALUATING LEARNING SYSTEMS

Malikowski et al. (2007) proposed a model for evaluation of learning systems that takes into consideration not just its features, but also its suitability for learning. Their model has five related categories: transmitting content, evaluating students, evaluating courses and instructors, creating class discussions, and creating computer-based instruction. The categories,

reshuffled for the purpose of clarity in the figure, are depicted in Figure 2.

This model has the potential to broaden the scope of research on learning systems. By focusing on these five wide areas, the authors simplify the process of evaluating learning systems. They must first, of course, be good vehicles for the creation of content. Most newer-generation learning systems have html editors that allow creation of content on the fly. Once the content is created, the question becomes their efficacy in transmitting that content to the learner. Newer systems have more intuitive interfaces that students can relate to, more readily accept a variety of file types, and can stream content from external and internal sites. Learning systems have long been known for their excellent communication tools. Nevertheless, the LMSs like ANGEL have several new tools like instant messaging and voice conferencing that are especially appealing to students. Finally, learning systems are also well known for their evaluation tools and those tools are getting better with every new release.

RECOMMENDATIONS FOR EVALUATION

Institutions that are evaluating a new learning system are faced with the chal-
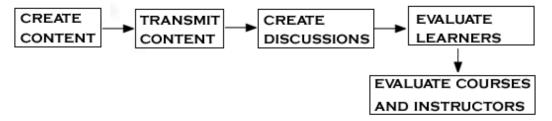
Figure 2. Malikowski et al. (2007) proposed model for research.

lenge of how to choose the best system to fit the needs of all members of the institutional community. Our recommendations for evaluation of an LMS based on our recent experience are that you appoint a request for proposal committee and staff it with members from all academic channels and ranks: information technology staff, instructional designers, administrators, faculty, support staff, and students. The act of putting all constituents on the committee and having them thoroughly evaluate the available systems will build in a set of proponents and early adopters who will champion their choice.

RECOMMENDATIONS FOR IMPLEMENTATION

Institutions contemplating a change in learning systems also will be faced with the challenge of how best to implement the change. Rogers' (2003) diffusion of innovations theory can illuminate the path to acceptance of the change. Rogers defines diffusion as "the process in which an innovation is communicated through certain channels over time among the members of a social system" (p. 5). Innovations must be communicated through a process of convergence as individuals exchange information and meaning. Rogers asserted that every new technology follows a specific process as it is introduced into a system. He clarified that change is difficult, so there is likely to be great resistance to change. At our institution, there was resistance as our faculty had been using WebCT

for years and did not see the need for change. However, once they began to see the learning benefits of the new ANGEL system, they began to come around.

The process of diffusion of the innovation at our institution has followed the process identified by Rogers (2003). According to Rogers, an innovation follows a set path to acceptance, going from introduction by innovators and influential change agents (in our case, these were the members of our request for proposal committee who evaluated all the systems), to knowledge of the innovation (promotion and training events), to acceptance and promotion by early adopters (the faculty who were on the committee who were the first to use the new system), then early majority (the first group of faculty to convert to the new system), to late majority (the second group of faculty converting midstream), and ultimately to laggards (the faculty who are still in the planning stages and still using the old system) (p. 37). The diffusion process is depicted in Figure 3.

CONCLUSION

If you are a leader, practitioner, and/or decision maker, you may be called on to evaluate learning systems and participate in the decision-making process. The clear choice, as explored here, is an LMS. Once a decision is made, you may also be involved in the process of implementation. Regardless of your role, it is important that you promote the idea of extensive training for faculty before the new system is rolled out
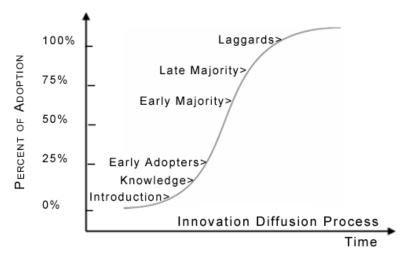
Figure 3. Innovation diffusion process at author institution.

to ensure a successful diffusion of the innovation. Learning management systems offer an enriched environment that goes beyond the usual content management tools to automated agents that allow instructors to focus on the individual learner in ways they might not have been able to before. Full-time faculty with a teaching load of several courses might have a large number of students each term, making it very difficult for faculty to provide a personalized touch to each student. Automating some of these processes through an LMS so they happen automatically in response to each learner's unique pacing and content mastery will improve the learning experience for online students.

REFERENCES

ANGEL Learning (2007). *Instructor tools.* Retrieved April 25, 2008, from http://angellearning.com/products/lms/instructor/default.html

Black, E. W., Beck, D., Dawson, K., Jinks, S., & DiPietro, M. (2007). The other side of the LMS: Considering implementation and use in the adoption of an LMS in online and blended learning environments. *TechTrends, 51*(2), 35-53.

Carmean, C., & Haefner, J. (2002, November-December). Mind over matter: Transforming course management systems into effective learning environments. *EDUCAUSE Review, 37*(6), 27-34. Retrieved January 28, 2008, from http://connect.educause.edu/library/abstract/MindoverMatterTransf/40369

Ceraulo, S. C. (2005). Benefits of upgrading to an LMS. *Distance Education Report, 9*(9), 6-7.

Clark, R. E. (1991). Media are "mere vehicles": The opening argument. In R. E. Clark (Ed.), *Learning from media: Arguments, analysis, and evidence* (pp. 1-12). Greenwich, CT: Information Age.

Falvo, D. A., & Johnson, B. F. (2005, March). *Use and implementation of learning management systems in the US.* Paper presented at the Society for Information Technology & Teacher Education, 2005 16th Annual International Conference, Phoenix, AZ.

Graf, D. (2008). *Tools for the management of information and learning.* Retrieved April 20, 2008, from http://webctce.nova.edu/SCRIPT/EDD_8012_OL1_33075_200830/scripts/serve_home

Green, K. (2001). *Ecommerce comes slowly to the campus.* Retrieved April 21, 2008, from http://www.campuscomputing.net/summaries/2000/index.html

Kvavik, R. B., & Caruso, J. B. (2005). *ECAR study of students and information technology, 2005: Convenience, connection, control, and learning.* (Research Report Volume 6). Boulder, CO: EDUCAUSE Center for Applied Research.

Retrieved April 24, 2008, from http://www
.educause.edu/ir/library/pdf/ers0506/rs/
ERS0506w.pdf

Lowes, S. (2008). Online teaching and classroom change: The trans-classroom teacher in the age of the internet. *Innovate, 4*(3). Retrieved February 16, 2008, from http://www
.innovateonline.info/index.php?view=
article&id=446

Malikowski, S. R., Thompson, M. E., & Theis, J. G. (2007). A model for research into course management systems: Bridging technology and learning theory. *Journal of Educational Computing Research, 36*(2), 149-173.

McNeely, B. (2005). Using technology as a learning tool, not just the cool new thing. In. D. G. Oblinger & J. Oblinger (Eds.), *Educating the Net generation* (pp. 4.1-4.10). Boulder, CO: EDUCAUSE. Retrieved April 23, 2008, from http://www.educause.edu/ir/library/pdf/
pub7101d.pdf

Morgan, G. (2003). *Faculty use of course management systems.* Retrieved April 21, 2008, from http://www.educause.edu/ir/library/pdf/
ecar_so/ers/ERS0302/ekf0302.pdf

Moore, M. G. (1991). Editorial: Distance education theory. *American Journal of Distance Edu-cation, 5*(3), 10-15. Retrieved April 25, 2008, from http://www.ajde.com/Contents/
vol5_3.htm#editorial

Moore, M. G. (1993). Theory of transactional distance. In D. Keegan (Ed.), *Theoretical principles of distance education* (pp. 33-38). New York: Routledge.

Moore, M. G. (2007). *Handbook of distance education* (2nd ed.). New York: Routledge.

Moore, M. G., & Kearsley, G. (1996). *Distance education: A systems view.* Belmont, CA: Wadsworth.

Oblinger, D. G., & Oblinger, J. (Eds.). (2005). Is it age or IT? In *Educating the Net generation* (pp. 2.1-2.19). Boulder, CO: EDUCAUSE. Retrieved April 23, 2008, from http://www
.educause.edu/ir/library/pdf/pub7101d.pdf

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed). New York: Free Press.

Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2006). *Teaching and learning at a distance: Foundations of distance education* (3rd ed.). Upper Saddle River, NJ: Pearson.

Smaldino, S. E., Russell, J. D., Heinich, R., & Molenda, M. (2005*). Instructional technology and media for learning* (8th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

"A LEARNING SYSTEM IS A TYPE OF TOOL USED TO MANAGE THE KNOWLEDGE ASSETS OF AN INSTITUTION AND MAKE THEM AVAILABLE TO LEARNERS.""

The EdVantage of Efolios

Emilee R. Vermilion

INTRODUCTION

Electronic portfolios (eFolios) are a relatively new teaching and learning strategy, with their roots in colleges and universities. They have gradually worked their way down to high schools and now into the lower grades. Through recent studies, ePortfolios have proven to be excellent documentation tools for a variety of purposes. Efolios can be used to measure academic achievement, growth over a period of time, or the accomplishment of state standards (Niguidula, 2005). The use of electronic portfolios in the Manatee County (Florida) School District (MCSD) is in its infancy stage, having been implemented for 2 years. The school district recently adopted

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a new mission statement; "The mission of Manatee County School District is to inspire our students with a passion for learning, empowered to pursue their dreams confidently and creatively while contributing to our community, nation, and world" (Manatee County School District, 2005). This new mission is one part of a new strategic plan titled EdVantage.

The word portfolio comes from the Latin words portare, meaning to carry, and foglio, meaning sheet of paper. A primary purpose of any type of portfolio assessment is to teach students how to evaluate their own work via application of quality standards and personal goals. Portfolios seem to mirror the comprehension and performance of a student (Gibbs, 2004). "Making an educational experience relevant and meaningful should include making the method of assessment relevant and meaningful" (Lambert, 2007, p. 78). Using portfolios provides for authentic and meaningful collection and assessment of student work that demonstrates achievement or improvement. Portfolios "create the opportunity to involve learners in directing, documenting, and evaluating their own learning" (Lambert, 2007, p. 78) Implicit in these meaningful collections is evidence of student self-reflection (Lambert, 2007).

Current state testing requirements have caused students to question that they are being taught "the test" and that there is no relevance to their learning. However, research indicates that if students connect their work to governmental standards they see value and relevance to their work (Ring & Foti, 2003). Yet, finding ways to

show students the connection is not an easy task. Many researchers and educators feel that portfolio assessment is superior and a more accurate indicator of a student's progress than more conventional types of assessment. Assessing student learning using more authentic methods is a current favored topic among state and federal agencies and has made a significant impact on the literature in pedagogy since the early 1980s (Lambert, 2007). Additionally, portfolios provide opportunities for students to showcase their talents, creativity, and individuality, as well as technological capabilities. The "beauty of [the use of] e-portfolios is that it fosters active learning not only in the areas of subject contents but also in the use of technology" (Lambert, 2007, p. 76). Motivating students to be high achievers and to have a desire to attend school has always been a difficult task for educators. However, as students become active learners while constructing their eFolios, they assume ownership of their learning and a desire to attend class while submitting quality assignments.

The EdVantage plan is the result of over 6,000 hours of teamwork by more than 190 Manatee County community leaders and School District employees (Manatee County School District, 2005), with a core team of 18 community members and 18 school board employees. The strategic objectives of EdVantage are to have each student actively engaged in the following goals by the year 2010: (1) continually demonstrate enthusiasm for the self-directed pursuit of knowledge, (2) articulate personal goals, create plans to achieve those goals, and exhibit progress toward their attainment, (3) continually participate in democratic processes, and (4) actively engage in global outreach (Manatee County School District, 2005).

The district plan to achieve and measure these goals is to institute a student eFolios program. A pilot program was initiated during the 2005-2006 school year. Two volunteers from eight elementary, four mid-dle, and five high schools were chosen to participate in the program. The result was 38 participants for the program: 18 elementary, 9 middle, and 11 high school teachers from a wide array of teaching fields, computer knowledge and experience. In the second year these numbers more than tripled, 112 teachers from 26 schools are currently participating in the program (Tschappat, personal communication, April 18, 2008). Superintendant of the Manatee School District, Roger Dearing, had hoped for 100 applications for the program and was pleasantly surprised by the nearly 200 applications the program received. "The project is a dynamic effort to bring the future of education into the classroom today. Students' records and reports, parent notification are paramount to the success of this program" (Dearing, personal communication, April 22, 2008).

The assistant superintendent for district support services stated that the "pioneers," our group of first year eFolio teachers, learned so much working with the instructional technology staff (ITS), and creating, often by trial and error, the template for the future of eFolio in our district (Sismore, 2008). Upon acceptance into the program, teachers agreed to attend training several times a year and assist their students in developing individual eFolios. Aime Poole, a sixth grade teacher at a district middle school stated, "I really value the eFolio trainings where we were afforded the opportunity to work with our team and ask for guidance from the ITS in an informal way" (Sismore, 2008, p. 13)

The student eFolios are digital showcases of student work showing goals, knowledge, values, growth, achievement, and their connection to the strategic objectives. After attending several trainings facilitated by members of the ITS department, eFolio teachers began learning how to use SchoolPage, the district's Web design and publication application. "The eFolio training provided the foundation necessary for me to inspire my students to

employ technology in the language arts classroom. We have had a blast!" stated Jenny Dobbs, a high school language arts teacher (Sismore, 2008, p. 13).

Some of the benefits of incorporating eFolios into the classroom include: improvement in teacher and student computer skills; storage of and access to student works such as artwork, photos, audio and video clips; the ability to integrate instruction by accessing portfolios in any subject from any classroom (Penta, 2002); students reflecting on the work they have completed in the classroom and tying them to the strategic objectives; and the ability of teachers, administrators, counselors and parents to easily access the students' work. Aside from the ease of accessibility, other advantages of ePortfolios are: having the capability to store multimedia; being easy to upgrade; and allowing cross-referencing of student work (Hewett, 2004).

> EFolios take the focus off the teacher and make learning more student-driven. Two second grade and two fifth grade teachers teamed up to work on the eFolio projects. "Working with the second graders really reenforces the fifth graders knowledge and understanding of the district's strategic objectives. It also boosts their confidence in the use of technology software and hardware involved. The second graders love to learn from the 'big kids' and the fifth graders love showing off what they've learned. It's a great opportunity for sharing between grade levels," recalled Tomlin. (Sismore, 2008, p. 13)

This approach teaches students to work in teams, teach each other, learn leadership and negotiation skills, and appreciate diversity (Hanfland, 1999). Efolios give students ownership and responsibility for their own learning (Hewett, 2004); they become the authors of their own academic success. With the teacher in the role of "coach" rather than the provider of knowl-

edge, self-directed learning is an attainable goal with technology integrated into the various content areas. Learning becomes interactive as students engage in problem solving rather than passively listening and memorizing (Hewett, 2004). Students are driven to produce quality work, while at the same time increasing their self-esteem by showcasing their best work (Hanfland, 1999).

Portfolios capitalize on students' natural tendency to save work, and they become an effective way to get them to take a second look and think about how they could improve future work (Hewett, 2004). With eFolios, the main idea is to keep students focused on learning rather than on individual projects or products (Garthwait & Verrill, 2003). Efolios are part of the learning process, not a result of it. This is accomplished greatly by student reflection, another key element of ePortfolios. Students are expected to collect, select, and reflect (Gibbs, 2004).

In Manatee County, students will collect artifacts, pieces of their best works, and either import, upload, or scan them into a district-owned Web page-making program, SchoolPage. Student will each have their own site to store and display their work. Once an artifact is linked to their site the students write a reflection. This reflection asks the students to think about their work and relate it back to one of the four strategic objectives. Many teachers devised creative ways to help their students learn the strategic objectives. A second grade teacher used the common game of four corners to assist students the objectives.

> I placed the four strategic objectives around the room. Then I told the children a scenario, for example that I loved to watch birds and that one day I wanted to work in a national park so I could always watch birds and learn more about them. Then I told the children to stand in the corner of where they would put that in an eportfolio. After the children had all chosen a corner, I asked one child from all

of the occupied corners to verbally explain why it would fit under the objective they had chosen. I used scenarios that would fit under multiple objectives and others that were more obvious, so the children could see that things can fit under more than one objective. (Sismore, 2008, p. 13)

For example, if a student wrote a report on water conservation, he might make a connection to the global outreach objective and how it is everyone on the earth's job to conserve water and offer suggestions of what can be done, or what their plans are to help their family conserve water. This reflection would then be linked to the students' work on their Web site. Once the students become familiar and comfortable with the process, they will become immersed in the strategic objectives and have greater insight as to their role in their school, family, community, and world. These eFolios will follow them throughout their schooling in Manatee County and serve as an excellent reminder of their accomplishments and growth.

Like all initiatives, there needs to be a way to measure the success of the program. The district measurement team created three rubrics to measure students' understanding and ownership of the four strategic objectives. All three rubrics are measured on a scale from exemplary, proficient, developing, and basic.

These rubrics will be used at the end of each school year to evaluate student portfolios. A random sampling of eFolios will be viewed by a measurement team. The district goal is to have every student in Manatee County involved in the eFolio program and actively incorporating the four strategic objectives into their lives.

The collection of student works is tied to the four strategic objectives, through reflection. These objectives are the pillars of EdVantage.

The teachers and students in the eFolio classrooms have improved their skills in technology, public speaking, leadership, and are immersed in the strategic objectives of our district's strategic plan, EdVantage. The best eFolio classrooms are truly

Manatee County School District
Strategic Objective Rubric

By 2010, each student will continually demonstrate enthusiasm for the self-directed pursuit of knowledge.

	Exemplary	Proficient	Developing	Basic
Curiosity	Passionately seeks additional knowledge beyond classroom activities, explores novel ideas and new challenges.	Independently explores novel ideas; welcomes new challenges and opportunities for learning.	When offered, is willing to explore new ideas in selected areas; requires prompting or guidance.	Accepts information as presented; lacks interest to explore ideas, challenges, or opportunities for learning; influenced by interests of others.
Involvement	Actively seeks opportunities to expand personal knowledge, engages in self-initiated and independent learning; engages in and promotes activities that increase the knowledge of others.	Engages in a range of activities that expand knowledge in areas of interest, understands the importance of pursuing involvement in learning.	Has difficulty sustaining their engagement; needs guidance to stay on a task and complete it.	Participates in assigned activities with little excitement; needs constant monitoring; may refuse to participate.
Energy	Willingly devotes time and effort to advance self-development and improvement through learning opportunities in and out of classroom; radiates excitement toward learning, energizes others to do the same.	Devotes time and effort to pursue self-development and improvement through learning opportunities, exhibits enjoyment of learning.	Spends the required time and effort, but requires structure, guidance, and monitoring.	Does not devote time and effort for learning; lacks drive.

Figure 1a.   Manatee County School District strategic objective rubric.

Manatee County School District
Strategic Objective Rubric

By 2010, each student will articulate personal goals, create plans to achieve those goals and exhibit progress toward their attainment.

	Exemplary	Proficient	Developing	Basic
GOAL SETTING	Shares written goals and proposed timelines with others; seeks others who can offer guidance to fulfill goals; identifies alternative methods for fulfilling goals; reevaluates goals on a periodic basis; encourages others to pursue goals.	Understands the importance of goal setting; articulates most of the steps to achieve goals; sets goals; may need assistance to overcome barriers.	Begins to understand the importance of goal setting; sets easily attainable goals with encouragement and direction.	Lacks understanding of importance of goal setting; passively believes that success will come without any effort; resists setting of goals.
ACHIEVEMENT	Shows pride in achievement of goals; seeks and uses available resources when making plans; maintains charts and timelines with built-in reminders of next steps in plan; assists others in identifying and locating resources needed for plans.	Focuses on completion of tasks; identifies and takes steps necessary to achieve goals; identifies and locates resources needed for completing the steps of a plan; maintains records to monitor progress toward goal achievement.	Shows some excitement when a task is completed; does not organize time effectively; is aware that there are steps needed in a plan; requires guidance to identify and locate resources needed for completing the steps of a plan.	Believes success is not important; has difficulty formulating a plan; regularly makes excuses for unfinished plans; is unaware of how to access resources.
COMMITMENT / SELF CONFIDENCE	Eagerly devotes time to work on goals; seeks opportunities to participate in goal related activities; uses failures as an opportunity for growth; shares outcomes with others; encourages commitment in others.	Commits time and energy to goals; requires little encouragement to explore goal related activities; recognizes that one can learn from failures.	Commits to goals when prompted; needs encouragement to remain focused on goals; is willing to take some risks.	Is unwilling to devote time and effort toward setting goals; avoids goal related activities; fears failure.

Figure 1b.   Manatee County School District strategic objective rubric.

Manatee County School District
Strategic Objective Rubric

By 2010, each student will continually participate in democratic processes.
By 2010, each student will actively engage in global outreach.

	Exemplary	Proficient	Developing	Basic
Character	Models respect and dignity; takes responsibility for one's own actions; keeps promises to self and others; promotes honesty and seeks to maintain trust; encourages others to adopt these behaviors.	Treats others and property with respect and dignity; keeps promises under most circumstances; takes responsibility for one's own actions; accepts the differences of others.	Takes responsibility for actions depending upon the consequences; needs encouragement to act honestly and treat others with respect and dignity; uses some inappropriate references toward others; is starting to broaden association with people of different backgrounds.	Doesn't take responsibility for own actions; may not tell the truth when facing consequences; frequently uses inappropriate references toward others; defies authority; tends to associate only with individuals similar to him or herself.
Stewardship	Is actively involved in identifying the needs of communities; seeks opportunities to serve and participates willingly; is committed to ongoing appraisal and directing resources to meet community needs; takes a leadership role and encourages other to model these behaviors.	Is aware of community needs and contributes willingly in areas of own choice; works collaboratively to achieve results; reflects and assesses the effects of volunteerism on self and community.	Requires help in identifying community needs; requires encouragement or external reward to contribute; recognizes value of involvement and participation; loses interest or lacks commitment to community contributions.	Sees community needs only when brought to own attention; disregards opportunities to make community contributions and to seek volunteer opportunities; contributes the minimum amount of effort.
Cultural Perspective	Is sensitive to and promotes an awareness of cultural diversity; is curious about and seeks knowledge of different cultures; builds positive relationships with different cultural groups; encourages others to adopt these behaviors.	Acknowledges that cultural diversity exists and enhances communities; is curious about different cultures; understands the importance of building relationships with different cultural groups.	Is aware of cultural diversity; recognizes but limits interactions with other cultures; begins to question personal biases.	Lacks awareness and sensitivity to cultural differences; promotes exclusion of those who are different.

Figure 1c.   Manatee County School District strategic objective rubric.

the wave of the future in that technology is seamlessly integrated into the curriculum, taking students to levels that until recently, were only a dream," stated Tschappat. (Sismore, 2008, p.)

As a member of the pioneer group of teachers in the eFolio program, I have been privileged to have had first-hand experience with the power of this program. The organization, thoroughness, passion, and dedication of the program members and creators is beyond reproach. I have personally observed the excitement of fellow educators and students who have not only benefited from but have also made important contributions to the current dynamics of EdVantage. Although there has not been enough time to collect conclusive data, I am sure that time will show that students involved in the EdVantage eFolio Program will have made the connection with the strategic objectives which will play an active role in their daily lives.

References

Christensen, L., & Johnson, B. (2004). *Educational research: Quantitative, qualitative, and mixed approaches.* Boston: Pearson.

Garthwait, A., & Verrill, J. (2003). E-portfolios: Documenting student progress. *Science and Children, 40*(8), 22-27.

Gibbs, H. (2004). Student portfolios: Documenting success. *Techniques: Connection Education and Careers, 79*(5), 27-31.

Hanfland, P. (1999). Electronic portfolios: Students documenting their best work. *Learning and Leading with Technology, 26*(6), 54-57.

Hewett, S. (2004). Electronic portfolios: Improving instructional practices. *TechTrends*, *48*(5), 14-28.

Lambert, C. (2007). e-Portfolios in action. *Kappa Delta Pi Record*, *43*(2), 76-81.

Manatee County School District. (2005). *District planning, policy and program evaluation.* Retrieved April 15, 2008, from http://www.manatee.k12.fl.us/sites/schlmgt/index.html

Niguidula, D. (2005). Documenting learning with digital portfolios. *Educational Leadership*, *63*(3), 44-47.

Penta, M. (2002). Student portfolios in a standardized world. *Kappa Delta Pi Record, 38*(2), 77-81.

Ring, G., & Foti, S. (2003). Addressing standards at the program level with electronic portfolios. *TechTrends*, *47*(2), 28-32.

Sismore, N. (2008). *Update on efolio program.* Retrieved April 15, 2008, from http://www.manatee.k12.fl.us/employees/Educator_Online/2008/February_2008.pdf

"PORTFOLIOS CAPITALIZE ON STUDENTS' NATURAL TENDENCY TO SAVE WORK, AND THEY BECOME AN EFFECTIVE WAY TO GET THEM TO TAKE A SECOND LOOK AND THINK ABOUT HOW THEY COULD IMPROVE THEIR FUTURE WORK."

Conquering the Fear of Online

Advising Students to Successful Online Course Taking

T. Justice Anderson

INTRODUCTION

Distance education continues to grow significantly. It now reaches students in elementary, secondary, and postsecondary schools as well as adult and professional educational institutions. Once considered a special form of education, distance education is currently the fastest growing form of domestic and international education (Gunawardena & McIsaac, 2004).

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Technological advances allows learning institutions of all types, from major universities to alternative elementary and secondary schools, to reach students in areas that would once have been considered unreachable. Gunawardena and McIsaac (2004) cited the rapid development of instructional technology and media as a solution to serving the educational needs of growing populations. Developments in technology allow distance education programs to provide specialized courses to students in remote geographic areas with increasing interactivity between student and teacher. With these advances, enrollment numbers for distance education programs are steadily increasing, and with them special concern arises about the need for support services for the online student, including advising.

ADVISING THE ONLINE STUDENT

Not every student takes an online course because the materials interest him or her. Sometimes there are degree requirements, inability to attend face-to-face classes, or other circumstances that lead to the students' enrollment in an online course (Varvel, 2001). Thus, the role of the advisor becomes crucial at setting the students expectations and preparing the students to be successful in an online course.

Self-efficacy plays a significant role in predicting academic achievement (Miltiadou & Savenye, 2003). DeTure (2004) argues that in the last 20 years, self-efficacy has been shown to have a significant impact on student performance. When confidence levels increase, performance levels increase as well. While self-efficacy concerns a person's confidence in his or her abilities to complete tasks or reach goals, it is not based entirely on actual experience with performing these tasks in the past (DeTure, 2004).

Miltiadou and Savenye (2003), citing Pintrich and De Groot (1990), suggested that the improvement of a student's self-efficacy belief leads to increased use of cognitive and metacognitive strategies and, thereby, higher academic performance. Miltiadou and Savenye (2003) asserted that to improve students' self-efficacy beliefs with online technology there needs to be an increase in the four sources of students' self-efficacy appraisal.

Song, Singleton, Hill, and Koh (2004) recommend working with learners to assist them in the development of time management strategies. Time management involves scheduling a time to study, planning weeks or months ahead, choosing a location to study, and effectively using the study time for realistic setting of goals (Miltiadou & Savenye, 2003). Students who use their time efficiently are more likely to learn and/or perform better than students who do not have good time management skills (Lynch & Dembo, 2004). Thus, it is vital that students possess good time management skills and that they set personal study and classroom times in their calendars just like any appointment (Boyd, 2004).

According to Reid (n.d.) there are several key considerations that faculty and advisors may wish to consider while working with students preparing to take an online course:

1. Advise students not to be too quick to enroll in a full course of online study. They should first introduce themselves to the use of technology by enrolling in an elective course offered over the Internet. Generally these courses require less commitment to time and study and will give a "first timer" an approximate means of gauging how well they will perform in future classes. The advice given should be, "Don't bite off more than you can chew."

2. Next, online classes tend to circumvent scheduling problems by allowing learners to make choices as to where and when they study and participate. This can also be the Achilles heel for some of the more disorganized in the student population. It's just too easy to put off study with all the freedom technology provides. Perhaps the biggest problem is going to be letting tasks and time get away. A high degree of time management skills are needed for assured success. These skills are an absolute necessity and as such should be stressed over and over.

3. A big part of computer-mediated education is making the student more responsible for self-learning. Instructors in the online environment facilitate, leaving the student to find their own way. Some students like the idea of having an instructor meeting and leading class discussion with them at a regular time. In the virtual classroom students instructors come and go at all hours. Some learners are sure to discover that this form of communication is difficult for them. How well they do at learning on their own will have a significant bearing on performance.

4. Enough cannot be stressed about the students' ability to navigate around the Internet. Using a variety of search engines and database managers is a prerequisite for most courses. Knowing how to use the World Wide Web,

Newsgroups, FTP, and e-mail for research and study are all part of the necessary tools a student should possess. A few weeks of navigation using the free demo time provided by Internet service providers service will get some of the weaker student's pointed in the right direction. Still, it is suggested that proficiency tests be administered to any student who shows an interest in a computer-mediated class.

Yukselturk and Bulut (2007) offered several recommendations for the design of high-quality online learning environments. The following is a partial list of recommendations that can also be looked at as best practices for advising students entering online classes:

1. Learners should be directed to be self-regulated learners (metacognitively, motivationally, behaviorally active participants).
2. Learners should attend orientation to obtain information about the nature of online learning and to become familiar with the requirements of online learning.
3. Learners should be encouraged to keep their motivation at high levels.
4. Learners should interact with other students by sharing information and opinions, analyzing data, and solving problems.

With these recommendations, advisors should help the performance of online learners.

CHARACTERISTICS OF SUCCESSFUL ONLINE STUDENTS

Web-based e-learning systems place more responsibilities on the learners than traditional face-to-face learning systems (Eom, Wen, & Ashill, 2006). Online learners must also have a greater skill set than face-to-face students. Successful online students are expected to have access to necessary hardware and software, and to be proficient in using the technology. Other differences include an emphasis on communication through writing, and a greater need for self-motivation and self-discipline (Mupinga, Nora, & Yaw, 2006).

According to the Illinois Online Network (n.d.) the online student should possess the following qualities:

1. Be open minded about sharing life, work, and educational experiences as part of the learning process.

    Introverts as well as extroverts find that the online process requires them to utilize their experiences. This forum for communication eliminates the visual barriers that hinder some individuals in expressing themselves. In addition, the student is given time to reflect on the information before responding. The online environment should be open and friendly.

2. Be able to communicate through writing.

    In the Virtual Classroom, nearly all communication is written, so it is critical that students feel comfortable in expressing themselves in writing. Many students have limited writing abilities, which should be addressed before or as part of the online experience. This may require remedial efforts on the part of the student.

3. Be self-motivated and self-disciplined.

    With the freedom and flexibility of the online environment comes responsibility. The online process takes a real commitment and discipline to keep up with the flow of the process.

4. Be willing to "speak up" if problems arise.

    Many of the nonverbal communication mechanisms that instructors use in determining whether students are having problems (confusion, frustration, boredom, absence, etc.) are

not possible in the online paradigm. If a student is experiencing difficulty on any level (either with the technology or with the course content), he or she must communicate this immediately. Otherwise the instructor will never know what is wrong.

5. Be willing and able to commit to 4 to 15 hours per week per course.

   Online is not easier than the traditional educational process. In fact, many students will say it requires much more time and commitment.

6. Be able to meet the minimum requirements for the program.

   The requirements for online are no less than that of any other quality educational program. The successful student will view online as a convenient way to receive their education—not an easier way.

7. Accept critical thinking and decision making as part of the learning process.

   The learning process requires the student to make decisions based on facts as well as experience. Assimilating information and executing the right decisions requires critical thought; case analysis does this very effectively.

8. Have access to a computer and modem (Internet connection).

   The communication medium is a computer, phone line, and modem; the student must have access to the necessary equipment.

9. Be able to think ideas through before responding.

   Meaningful and quality input into the virtual classroom is an essential part of the learning process. Time is given in the process to allow for the careful consideration of responses. The testing and challenging of ideas is encouraged; you will not always be right, just be prepared to accept a challenge.

10. Feel that high quality learning can take place without a traditional classroom.

    If the student feels that a traditional classroom is a prerequisite to learning, they may be more comfortable in the traditional classroom. Online is not for everybody. A student that wants to be on a traditional campus attending a traditional classroom is probably not going to be happy online. While the level of social interaction can be very high in the virtual classroom given that many barriers come down in the online format, it is not the same as living in a dorm on a campus. This should be made known. An online student is expected to:

- Participate in the virtual classroom 5-7 days a week
- Be able to work with others in completing projects
- Be able to use the technology properly
- Be able to meet the minimum standards as set forth by the institution
- Be able to complete assignments on time
- Enjoy communicating in writing.

CONCLUSION

With increases in technology the ability for institutions to offer distance education courses will continue to grow, reaching students in areas that were once considered unreachable. Universities use distance education to increase the number of students who have access to higher education; companies use it to upgrade their workers' skills and keep them abreast of rapidly advancing technologies; individuals use it for their own professional development and to enhance their career opportunities; governments use it to provide on-the-job training to teachers or other workers, to enhance the quality of traditional primary and secondary school-

ing, and to deliver instruction to remote rural areas that might not otherwise be served (Postashnik & Capper, 1998).

What does this mean for higher education institutions? Special attention needs to be paid to the online student. Proper advising of the online student, setting the expectations up front, preparing the student for what they will face in the online course can lead to greater course satisfaction and retention of the online student.

REFERENCES

Boyd, D. (2004). The characteristics of successful online students. *New Horizons in Adult Education*, *18*(2), 31-39.

DeTure, M. (2004). Cognitive style and self-efficacy: Predicting student success in online distance education. *American Journal of Distance Education*, *18*(1), 21-38.

Eom, S., Wen, H., & Ashill, N. (2006). The determinants of students' perceived learning outcomes and satisfaction in university online education: An Empirical Investigation. *Decision Sciences Journal of Innovation Education*, *4*(1), 215-235.

Gunawardena, C. N., & McIsaac, M. S., (2004). Distance education. In D. H. Jonassen (Ed.), *Handbook of research on educational communications and technology* (pp. 355-96). Mahwah, NJ: Erlbaum.

Lynch, R., & Dembo, M. (2004). The relationship between self-regulation and online learning in a blended learning context. *The International Review of Research in Open and Distance Learning*, *5*(2). Retrieved August 24, 2008, from http://www.irrodl.org/index.php/irrodl/article/viewArticle/189/271

Illinois Online Network: Educational Resources. (n.d.). Retrieved August 26, 2008, from http://www.ion.uillinois.edu/resources/tutuorials/pedagogy/StudentProfile.asp

Miltiadou, M., & Savenye, W. (2003). Applying social cognitive constructs of motivation to enhance student success in online distance education. *AACE Journal*, *11*(1), 78-95.

Mupinga, D., Nora, R., & Yaw, D. (2006). The learning styles, expectations, and needs of online students. *College Teaching*, *54*(1), 185-189.

Potashnik, M., & Capper, J. (1998). Distance education: Growth and diversity. *Finance and Development, 35(1).* Retrieved April 27, 2008, from http://www.worldbank.org/fandd/english/0398/articles/0110398.htm

Reid, J. (n.d). *What every student should know about online learning*. Retrieved August 24, 2008, from http://www.ion.uillinois.edu/resources/tutorials/overview/reid.html

Song, L., Singleton, E. S., Hill, J. R., & Koh, M. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *The Internet and Higher Education*, *7*(1), 59-70.

Varvel, V. (2001, March/April). Facilitating every student in an online course. *Pointers & clickers: ION's tech tip of the month*. Retrieved August 24, 2008, from http://www.ion.uillinois.edu/resources/pointersclickers/2001_03/index.asp

Yukselturk, E., & Bulut, S. (2007). Predictors for student success in an online course. *Educational Technology & Society*, *10*(2), 71-83.

"NOT EVERY STUDENT TAKES AN ONLINE COURSE BECAUSE THE MATERIALS INTEREST HIM OR HER."

Scaffolding Student Facilitation of Online Discussions

Natalie B. Milman

One assignment that I require in several of my courses involves a student or a team of two-to-three students to facilitate an online discussion for a week. As part of the assignment, students are to author a summary of the week's discussion and to write a reflective

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"debrief statement" that shares how responsibilities were divided between co-facilitators and what they learned as a result of facilitating the week's discussion. I require the discussion facilitation assignment because I believe it is imperative that today's online students engage in determining the course of their own and their peers' learning, experience first-hand what it is like to be in charge of an online discussion (an activity they may be responsible for leading at some point professionally and/or personally), and examine the course content from different perspectives. In many ways, this assignment mirrors my constructivist (Duffy & Cunningham, 1996; Fosnot, 1989, 1996) educational philosophy.

For some students, facilitating (individually or in a team) a week's discussion can seem overwhelming because they are often uncomfortable with serving as leaders on topics new to them. And, it certainly can be very challenging, particularly if students are required to facilitate without any support. I assure my students that any feelings of unease are normal. Moreover, I actively participate in discussions to ensure that the discussions are going well and inaccurate information is addressed (if

facilitators do not catch such inaccuracies). However, I also emphasize that I am available to answer questions, as well as help them.

To scaffold the facilitation of online discussions, first I share guidelines (see Figure 1) and resources (see Figure 2) for facilitating the discussions. Second, I model how to facilitate discussions the first few weeks of class. Third, about a week before leading a discussion, I e-mail a draft of the lecture to the upcoming week's facilitators (see Figure 3). This allows them to read the lecture ahead of time, to ask questions about the material, to craft discussion questions, and to become more comfortable with facilitating. In some courses I supply the questions for discussion and in others I require students to create them; if so, I provide examples of questions that they may use, modify, or cut. The approach used depends primarily on the course objectives. Finally, if experienced facilitators (those who have taken other courses previously with this same assignment) are enrolled in the course, I pair them with students new to the program/course so that they learn from their more experienced peers.

Overall, I have found this assignment to be very rewarding; not only for students, but also for me. I have to admit that it is difficult to relinquish the direction of our course discussions sometimes, but this is part of the learning process where learning is in the hands of students—and not just their instructors. Anecdotally, the debrief statements, the reflections on how responsibilities were divided, and lessons learned, present a picture of student learning that is far richer than if I had led the discussions. Often, students describe their surprise at how much they have learned, as well as how much effort was involved in facilitating a discussion.

Engaging students in meaningful online discourse is a major responsibility for any distance educator. Another formidable task is to foster instruction in such a way that students experience ownership of the content and the learning process. Facilitation of online discussions provides students with the opportunity to gain first-hand experience managing online discussions, determining their own learning and that of their peers, and sharing their own expertise in a content area.

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1. **Read the lecture and questions for discussion** prior to your assigned week—A draft lecture is e-mailed to facilitators at least a week before the facilitation is to begin.
2. **Guide the discussions** by asking thought-provoking questions, expanding on the other students' viewpoints, offering help and feedback, and by sharing pertinent resources
3. **Promote politeness and courtesy** by being supportive and complimentary to those who provide good effort
4. **Be a responsive, engaged facilitator** by responding to many postings but not necessarily *every* posting! Keep in mind that facilitators are to foster and promote discussion. At times, a facilitator may wish to summarize or highlight an important point, and others s/he may wish to ask a question or request more information.
5. **Communicate your concerns** to your instructor and your shared responsibilities with your cofacilitator(s)—issues will arise so it is important to document and discuss your concerns. Any problems between facilitators should be communicated
6. **Summarize the week's discussion**—Part of your responsibility at the end of this week's discussion will be to bring the discussion to a close by synthesizing the week's discussion where you will also highlight salient and possibly even controversial points.

Figure 1.   Guidelines for facilitating online discussions.

Figure 2. Resources for facilitating online discussions.

Attached is the **draft** of the week <insert #> lecture which will begin <insert day and date>. I am sending this draft early to give you time to read the lecture and ask questions. Please:

1. Review the attached DRAFT lecture of week <insert #>.
2. Communicate with your partner(s) to determine how you will share the responsibilities for cofacilitating the discussion, including writing up the summary.
3. Post three questions no later than 10 AM EST on <insert day and date>. Be sure to use "posting descriptors" in the subject line (e.g., Q1. Define Technology). NOTE: At the end of this e-mail are some suggested questions. It is up to you to use, modify, and/or craft open-ended, thought-provoking questions that will foster robust discussion (not dull, easy-to-answer questions in which your peers will simply regurgitate information that is already in the lecture, web links, and/or books).
4. Review guidelines and resources for facilitating online discussions especially:
   • Appendix A of Brescia and Miller (2005) to learn what you can **do** to do a better job at facilitating, and
   • http://pre2005.flexiblelearning.net.au/guides/facilitation.html
5. Contact me with any questions or concerns.
6. Post the team summary of the week's discussion and your individual "debrief" statement no later than <insert day and date> in the appropriate locations.

Figure 3. Sample e-mail with instructions to facilitators.
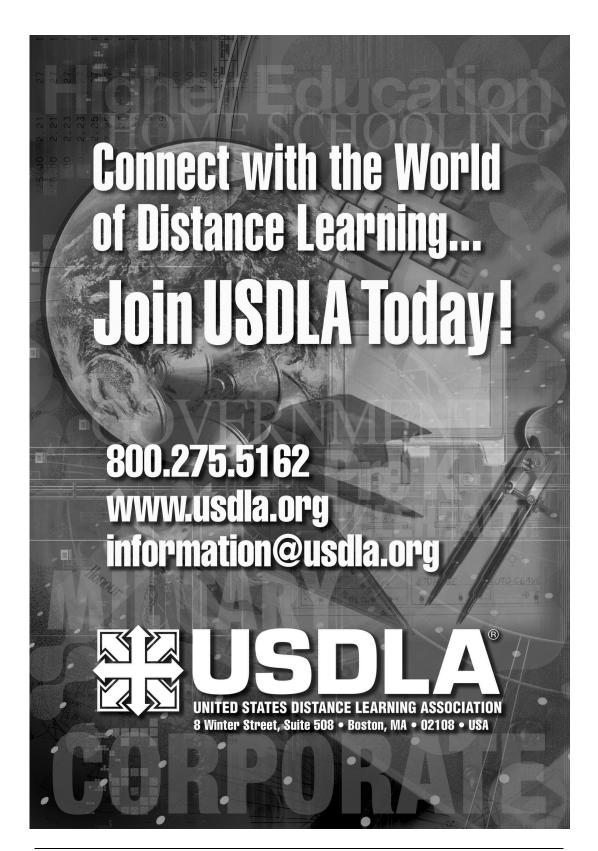
REFERENCES

Brescia, W. F., & Miller, M. T. (2005). Enhancing graduate students' performance as threaded discussion leaders in a Web-based proposal writing course. *Quarterly Review of Distance Education, 6*(4), 385-396.

Duffy, T. M., & Cunningham, D. J. (1996). Constructivism: Implications for the design and delivery of instruction. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 170-198). New York: Simon & Schuster Macmillan.

Fosnot, C. T. (1989). *Enquiring teachers enquiring learners: A constructivist approach to teaching*. New York: Teachers College Press.

Fosnot, C. T. (Ed.). (1996). *Constructivism: Theory, perspectives, and practice*. New York: Teachers College Press.

The *Herald* article goes on to explain that districts can collaborate with other school districts, create their own full-time virtual schools, or contract with providers that are approved by the state. This must happen in time for the beginning of the next school year—and this virtual school must be K-12, not just a secondary school offering.

Obviously, this mandate is an exciting and positive recognition of the value of the innovation of distance education. Just as obviously, it poses many real problems for educational leaders and administrators—there also is the potential for abuse. Leaders in the field of distance education have the opportunity to "do it right this time." We must not make grandiose claims or promote unsupported techniques. The literature is clear: distance education works. Learning occurs if teaching is appropriate; it is not the technologies, but rather the methods, approaches, and techniques of effective course design and instructional delivery that determine learning.

And finally, to mandate is to command or order. And, now in Florida, there has been an order, and because of this order it is likely a new order will be established. At this critical point, we must not forget Machiavelli's (1532) warning,

> There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things.

REFERENCES

Allen, I., & Seaman, J. (2007). *Online nation*. Needham, MA: Sloan Consortium.

Green, L. (2008, September 30). State starts virtual school mandate. *The Miami Herald*, p. B5.

Machiavelli, N. (1532). *The prince*.

"THERE IS NOTHING MORE DIFFICULT TO TAKE IN HAND, MORE PERILOUS TO CONDUCT, OR MORE UNCERTAIN IN ITS SUCCESS, THAN TO TAKE THE LEAD IN THE INTRODUCTION OF A NEW ORDER OF THINGS."

Virtual Schools Mandated!

Michael Simonson

A recent article in the *Miami Herald* written by Laura Green of the *Palm Beach Post* had the startling title "State Starts Virtual School Mandate." Mandate is a strong word—a mandate is an order, a requirement, an expectation.

Of course, calling the title startling may be a little strong. Most likely, readers of either newspaper did not give the article or its title more than passing interest. But, educators generally, and distance educators specifically, most likely did a double-take. They knew this article and the state law it discussed were another indicator that distance education had arrived.

Most are very aware of the many Sloan Consortium reports that have documented the steady growth of distance education in colleges and universities. In the 2007 monograph, *Online Nation*, it was reported that more than 3.5 million college students enrolled in at least one online course in 2006, and that most college administrators felt that online education was important to the future of their institutions.

But now Florida has a state law mandating virtual schooling. Mandating, not just planning. Of course, virtual schooling has been important to public education for many years, mostly as an "initiative," a "plan," and sometimes even an actual organization, but now we have a state law mandating virtual schooling.

In recent issues of this journal, there have been extensive and interesting articles describing statewide distance education initiatives, such as the Iowa Communications Network, the Florida Virtual School, and Network Nebraska, and there are plans to publish reviews of other large-scale K-12 initiatives like the Digital Dakota Network, and K-12 networks in Wisconsin. Now, however, every school district in a state is expected to have a virtual school up and running within 1 year—a plan "believed to be the most wide-ranging in the nation."

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