

The Evolution of Distance Education: Implications for Instructional Design on the Potential of the Web

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In this issue, we offer our readers the second of a three-part series on distance education.

The growth of online distance learning (e-learning) is explosive in almost all sectors, and in many developed and developing countries. We believe that the dominant approach now realizes very little, if any, of e-learning's transformational potential, nor can we be assured that high instructional quality is recognized and valued.

The challenge for ID professionals is not only to evolve the field, but also to assure that the products of sound professional design practice lead the e-learning enterprise.

In the first of these three articles (*TechTrends* 52.3), we described the major e-learning trends that we have observed in the training sector. The next issue will focus on e-learning in the K-12 environment. We offer our arguments as opinions on how each sector is affecting (or ought to affect) the ID field. Our hope is that the thoughts presented here will be the beginning of many dialogues on the future of ID and e-learning—not the last word.

Part 2: Higher Education

The explosive growth of distance education is rapidly transforming post-secondary education. As in the training arena described in Part 1 (*TechTrends* 52.3), the primary driving forces are economics and access. Distance learning is rapidly becoming a popular choice for continu-

ing professional education, mid-career degree programs, and lifelong learning of all kinds. As so-called “non-traditional” students become an increasingly large segment of the student body at the post-secondary level, campus-based programs, residential or otherwise, may be leveling off in enrollment. Colleges and universities, therefore, see distance education as a way of sustaining growth. For some institutions, even a modest distance education program (say, 5% of enrollment) could mean the difference between a budgetary surplus and a loss—especially for tuition-driven instructional programs. Thus, distance education has an importance much greater than the enrollment figures may suggest.

For many institutions, a principal motivator is the relatively unfamiliar force of competition. For-profit, private-sector competitors are breaking the monopoly of conventional institutions, provoking a fast-moving entrepreneurial response by some schools while leaving others at a standstill. Since distance education programs theoretically can serve remote learners as well as they serve local ones, even institutions with isolated service areas are in competition. Often, the result seems to be an ill-considered “land rush” mentality: “We’d better stake out our claim before all the good territory is gone; we’ll worry about effectively mining it later.”

As we have seen in other periods of exuberance, quality becomes a lesser concern.

Traditionally, quality of instruction at the post-secondary level is almost entirely the affair of the individual faculty member. Accreditation typically focuses on resources and offerings, not program performance. In distance education, however, we are beginning to see alternatives to this model emerge. The spread of performance-based testing and the growing concern with quality distance education are leading a number of providers to examine models of quality based on learner performance (University of Illinois, 1999). These same standards may eventually begin to apply to classroom-based academic programs as well—most likely in response to demand increases from prospective employers and learners. Thus, distance education could eventually be the point of leverage to develop and to propagate performance-based quality standards throughout post-secondary education. We have observed that for the most part, post-secondary curriculum standards and tests are rare even at the department level. Neither faculty nor students make much of distinction between information and instruction or even between factual knowledge and skill. It is too early to predict confidently that meaningful quality standards for instruction will emerge from the present confusion over quality in distance education. For now, at least, there is little consensus over the definition of quality in distance education. However, in the absence of the traditional “territory” concept, we predict competition will become a much more significant issue with quality being the predominant distinguishing attribute.

Faculty, e-learning, and ID

The Distance Education and Training Council (DETC) calls distance education a “mainstream” educational delivery method and predict more than a 300% increase in students served in the next five years (DETC, 2004). With such explosive e-learning growth, most colleges and universities are willingly evolving to this new environment and providing some, if not a significant portion, of their educational offerings in web-based or other nontraditional formats. Faculty at these institutions are also being asked, and sometimes forced, to evolve as well.

As in business training, most of the development work in distance education is being done by faculty with no formal training in teaching of any kind, not to mention training in ID or any of the related e-learning fields. Sophisticated programs use instructional designers and other specialists in a supporting role to develop distance education, but, in our experience, this is still relatively rare. This leads faculty members in most e-learning initiatives to adopt a *craft approach*. Under

the craft approach, an individual teacher fully designs and develops the course and the related materials based on what has worked for him or her in the traditional classroom and puts it on the web (Moore & Kearsley, 1996). However, models of classroom instructional delivery and models of online delivery systems are vastly different; they should *not* be seen as one and the same. Taking what one is familiar with and/or using what works in one environment and simply duplicating it in a new environment can lead to limited positive results.

There are many problems with the craft approach. For starters, there is little evidence that traditional classroom models are all that effective to begin with. Moller points out that while traditional institutions can benefit from using electronic delivery methods, new ways of using technology have to be employed and understood by educators and merely “recreating the present [classroom experience] in a more efficient manner seems wasteful when the status quo is of questionable effectiveness” (1998, p. 121). Educators in the distance medium are faced with new pedagogical issues surrounding student interactions, course content design and delivery, multiple levels of communication, defining new types of assignments and performance expectations, and different assessment and evaluation techniques (to name a few).

Second, such an approach usually makes little real use of the wealth of technology available. The craft approach often takes advantage of only the simplest technology with little regard to how advances in streaming video, voice, print, and data resources can be utilized to enhance instruction.

Third, this approach can be very time-intensive for the faculty member in question, leading to feelings of isolation and a sense of being overworked. Even among faculty who find teaching in the online environment to be

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a positive and rewarding experience, the most common complaint is that the environment can be too personally consuming. The very nature of producing an educational process in which the learner and teacher are separated by time and space, communicating through technology, and probably using different instructional strategies is markedly different from traditional face-to-face instruction. It is not simply a matter of the faculty member's content knowledge. Not only is there a pedagogical difference, but also the inclusion of technology often requires new skill sets, new ways of thinking, new time

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and resource management skills, new ways of communicating and new communication boundaries, additional workers, and interdepartmental coordination to be done successfully.

Fourth, such an approach is not rooted in sound ID theory and does little to further a comprehensive vision of a university-wide e-learning program or e-learning as a whole.

The craft approach is also related to faculty trying to exert traditional control over the learning process. In traditional face-to-face classes, faculty have direct control over most, if not all, aspects of their instruction. In e-learning, faculty are faced with the

challenge of collaborating with other departments, often including newly formed departments created with the sole purpose of managing development and controlling the quality of the university's e-learning initiatives (such as Distance Education Departments). In some instances, faculty are required to teach classes created by someone else and ill-suited to their own personal style. This also brings to the fore issues of intellectual property rights. Faculty who create classes are often not given intellectual control over developed courses.

Course development, control of the learning process, collaboration, and intellectual property rights are not the only adjustment issues for faculty. Faculty also have concerns about training, salary, workload, and promotion and tenure. Generally, the research supports three contentions about e-learning course design:

1. It is more work than traditional face-to-face classes (at least at first). This applies to development time, maintenance, and contact hours with students, etc
2. Professors often fear that student evaluations will be lower for e-learning courses than for face-to-face courses, and there is growing literature to support the merit of this concern. This may be attributable to the difficulty inherent in creating the relationships which influence ratings and are necessary for effective instructional delivery. Faculty fear tenure and promotion repercussions.
3. E-learning courses can carry a certain “stigma” which, in some places, reduces the credit given to professors for the work put into the classes.

In their own way, each of these three contentions is directly related to a lack of sound ID methodology. This, of course, begs the question: If e-learning is more work, has the potential for lower evaluations, and can lead to less reward, who would want to embrace it? Interestingly enough, a study conducted by the National Education Association (2000) showed that 75 percent of faculty currently held positive feelings about distance learning. Some of the reasons faculty have cited for these feelings are flexibility, greater individual student participation, and the asynchronous nature of conversations that allow students and faculty more time to think about and formulate responses and make greater connections. This allows for longer, more in-depth, and higher quality discussions. Faculty also seem to generally appreciate the opportunity to advance their technical know-how and develop new teaching and presentation skills. Currently, despite challenges, the faculty are there, and they appear willing.

Regardless of the size of the program, these are all areas where ID professionals (regardless of philosophical bent) are needed to create a clear framework outlining the goals, delivery, and structure of the e-learning program with clear benchmarks for success. Such efforts would go a long way toward improving e-learning initiatives and such a collaborative effort between ID professionals and faculty would also aid in alleviating faculty concerns and help to bring more faculty into the “fold” of e-learning.

According to Jones and Moller (2003), faculty buy-in is needed for e-learning programs that desire to build and maintain long-term quality. In the end, without a motivated self-interest on the part of faculty, individual participation will wane, and e-learning will suffer. If e-learning is to become a truly viable environment for learning, we have to develop new processes with clear

guidelines that support a “systematic examination of our pedagogical underpinnings” (Lynch, Corry, & Koffenberger, 1999, ¶ 20) and take care of faculty concerns. These are areas of challenge where ID professionals can make a critical difference.

Promoting Faculty Buy-In

If distance education is to become “mainstream” with continued productivity, we need to begin to clearly address e-learning issues such as course development, salary, workload, intellectual property rights, and promotion and tenure. Each of these concerns can be seen as integral components in an e-learning system. In order to ensure the highest level of faculty performance in e-learning, the following suggestions are offered for discussion:

Training and course development

- Whether development is by the individual faculty member or a team, the need is for simple, highly-templated instructional models and tools for building learning objects and entire courses. Given the relatively limited economies of scale which are likely to be possible in many distance education contexts, these tools must be cost-effective.
- Training for faculty deploying online courses should be required (particularly in the areas of online instructional design, teaching, and course revision), and should come with some form of compensation (pay, release time).
- Faculty must be given a voice in the process, and faculty concerns about a program’s effectiveness must be addressed.

Salary, workload, and intellectual property rights

- Standards for course payments, royalty payments, intellectual property contracts, workload reductions, and/or supplemental pay should be established.
- Faculty, at a minimum, should be paid at the same rate for a distance education course as for a comparable face-to-face course.
- To reduce workload constraints and improve morale, faculty should be granted paid training or leave time to develop online classes.
- If faculty will be teaching a class created by someone else, they should be given time to adjust the materials and to get up to speed with the class.
- Class size in distance education classes should be strictly controlled.
- Faculty need to be granted intellectual property rights over their creations and paid when their creations are used.

- The institution should have a support system in place for faculty (such as a distance education center) to handle technical issues related to the course; this should not be a management issue for faculty.

Promotion and tenure

- Distance education pursuits are legitimate scholarly work and the academic community should respect them as such.
- Junior faculty should be encouraged to engage in distance education pursuits.
- For promotion and tenure, teaching distance education courses should carry the same consideration as face-to-face courses.
- There should be an understanding that distance environment requires a significant orientation period for faculty to learn the necessary skills to be successful and thrive in the environment. As a consequence, student evaluations may be lower than traditional (face-to-face, or FTF) evaluations for a while. In general, comparisons between FTF and online instruction are not particularly valid in most all contexts.
- Development of distance education courses is a worthy professional scholarship/service activity that should be counted toward tenure consideration and promotion.

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Implications for ID

These observations lead to the conclusion that, as in training, ID should be at the forefront of creating cost-effective models and tools for distance education. Such ID initiatives would serve to improve training, course design, delivery, and evaluation. They would also function to improve instruction, to increase all manner of interactions, to provide for appropriate student activities and, consequently, to eliminate some of the course development and workload concerns of faculty. Ideally, such models should have templated learning objects based on the full range of available options for computer-based instruction. They would go well beyond the now-dominant “online textbook” models

for distance education and, to the extent which can be cost-justified, they would probably emphasize meaningful interaction. The models and tools would foster an economy of learning objects to achieve economies of scale where possible. For example, these ID models and tools would:

- Use classical CBT tutorial and simulation techniques only for high-volume or high-criticality course components due to the high cost of development for these systems.
- Use case/problem-based (constructivist) techniques only for low-volume, high-criticality integration of learning and moderate- to ill-structured problem-solving. These techniques have a moderately high cost of development coupled with costly, labor-intensive implementation.
- Use knowledge management as much as possible for factual knowledge and for low-volume and low-criticality declarative knowledge and well-structured procedures.
- Integrate knowledge management, community, and tutorial techniques within the context of the entire curriculum to support a certification or degree program.
- Vary degree and kind of interaction and feedback depending on learning needs and types of learners.
- Use performance-based assessment which is simple to develop and only moderately costly to use.

Fully developed models of this sort might even include a mix of online and campus-based learning events and, perhaps, even some conventional classroom-based seminars. However, such “traditional” program components would come to be viewed by the learners as high-cost (they have to come to campus) and would tend to be reserved for high-value learning events such as face-to-face team projects, community-building and work sessions, or lectures on topics too new, too ephemeral, or otherwise inappropriate for online presentation.

It is unclear how, or if, a market will emerge for learning objects (or whatever the scalable technology-based components of distance education courses turn out to be). If a market does

emerge, it is unclear how, or if, such a market will value ID’s potential contributions. Thus, a major challenge for the ID field is to get faculty and learners to recognize the value of sound instructional design regardless of the medium of delivery or the theoretical framework used to define it. In the absence of meaningful performance-based quality standards for distance learning, this may not be possible.

The conclusion, therefore, is to understand that the faculty, the distance education organizations, the learners and their employers, and the ID field all have a common interest in performance-based definitions of quality. In the short term, ID faculty should lead the effort to shape institutional policies on distance education quality standards and accreditation and should actively engage in consultation and development. The time for such initiatives is now. To abuse a cliché whether in training or higher education, “the train is leaving the station, but it’s not clear that ID, as a field, will be on board.”

We will finish out this three part series in the next issue of *TechTrends* with an examination of instructional design issues and the future of distance education in the K-12 educational sector.

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References

- Corry, M., Koffenberger, W., & Lynch, W. (1999). Web-based distance education: Faculty recruitment and training. In *Proceedings of 1999* (pp. 671-676). Chesapeake, VA: AACE.
- Distance Education Survey. (2004). *A report on course structure and educational services in distance education and training council member institutions.*
- Jones, A., & Moller, L. (2003). Comparison of continuing education and resident faculty’s attitudes towards distance education. *College and University Media Review*, 9(1), 11-38.
- Moller, L. (1998). Designing communities of learners for asynchronous distance education. *Educational Technology and Research Development Journal*, 46(4), 115-122.
- Moore, M. G., & Kearsley, G. (1996). *Distance education: A systems view.* Belmont, CA: Wadsworth Publishing Company.
- National Education Association. (2000). *A survey of traditional and distance learning higher education members.* Washington, DC: Author.

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