Editor's Notes

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THINKING ABOUT THE TILDE

It is probably safe to assume that anyone reading any part of this book grew up with encyclopedias. We have memories of looking up places, dates, or exotic animals and reading the short descriptions and explanations for each item (maybe even copying the entries down on ruled newsprint, but that's another story!). If the encyclopedia was well done, we became curious and wanted to know more than what was presented in the entries.

The volumes of a great encyclopedia, particularly one that spans the field of distance learning and teaching, must be more than a reference resource, more than a compilation or simple collection of entries. So how do we capture the full range of issues, ideas, practical applications, strategies, theories, and concerns associated with distance learning?

As I gathered articles and invited authors to contribute to this important encyclopedia on distance learning, I needed a metaphor, some sort of model for thinking about distance learning, teaching, and the technologies that support this environment. I chose the TILDE, not only as a convenient acronym, but also for its unique features as a "…dual, if not split-minded character" (Korpela, 1998, p. 3). The TILDE, besides its use as a diacritical mark for many languages, was originally an ASCII character for the overline. Korpela tells us that "the originally intended primary use as overline is probably completely forgotten, partly because the glyph of the character is tilde-like ("wave"), not a straight overline. But in the early days of computing, when bits were expensive and bytes cost fortunes, people took the tilde into all kinds of uses. Just because it was there, in the keyboards and character code" (p. 3).

The TILDE as an acronym works very well for thinking about the kinds of articles I wanted to include in this encyclopedia: Technology, Instruction (teaching), Learning, Design, and Evaluation. Each of these categories encompasses a range of both media applications and various aspects of teaching, learning, and program improvement. While it may seem that we can discuss each of these as separate entities, the reality of online distance learning has merged all aspects of teaching (professor and instructor, support services, interactivity, design, evaluation, technology) and learning (usability, access, interactivity, design, evaluation, technology). Indeed, online distance learning is a manifestation of a true reform/shift in education since societies began educating the masses and not just the elite. More on that to follow.

ONLINE DISTANCE LEARNING: A TRUE PARADIGM SHIFT

The promise of various technologies to "revolutionize" education has never quite met such lofty expectations, that is, until today. Online distance learning, REAL learning not just glorified electronic correspondence courses, has changed forever the face of education:

I sit in my comfortable home office, a loft overlooking a lake in the North Woods. I am on my computer chatting in realtime with instant messaging built into my course management system. The student is having trouble visualizing a model. We open the white board and I draw the ideas. She responds with some modifications, and suddenly understands. While I wait for her changes, I track the progress of some of the members of the class who appear to be struggling. I send a private email to a fellow who has just posted a great discussion topic, but who rarely participates in the other topics. I ask him if he would check a related posting and comment, letting him know I am aware of his participation and am giving him a gentle nudge. The cell phone rings, another student with a quick question that seemed easier to ask using voice rather than typing. We resolve the issue and have a laugh over a funny typo in my last post. Meanwhile, the student using the white board has her "aha" moment, thanks me briefly, and signs off. I continue to monitor my email and instant messages while grading the last assignments. I'll go to the office on campus tomorrow to meet with two students who are ready to start their final thesis work. Next week, I am at a conference though my students will still "see" me everyday in class and can call me on the cell phone if they have any immediate questions.

There is an old joke about bringing back three people from 100 years ago: a blacksmith, a surgeon, and a teacher into the 21st century. The blacksmith would be amazed at the advances in metal working and would be hard pressed to recognize the computer-controlled robots that create everything from cars to memory chips (and probably more than a few horseshoes as well). The surgeon would be far out of his league in the operating room and would not recognize the various monitoring devices much less grasp how he could perform surgery on a patient in Fargo while operating from a room in Paris (see for example: http://dir.salon.com/health/col/bob/2000/01/31/telemedicine/index.html).

The teacher, however, would have very little trouble recognizing the rows of desks, use of books, rules of order and even teaching to the (standardized) test!

That punchline has lately lost its punch. No teacher from 100 years ago would recognize my home office as described above as any kind of classroom, much less one that is interactive and vibrant with learning. Like the surgeon and the blacksmith, the tools I now use for teaching are far beyond mere modifications of previous tools. That is, I have not just upgraded my chalkboard for PowerPoint slides. I am now using interactive modeling, Flash animation, and multiple media to provide several access points to learning. I don't just teach a class in whole group session, I am actually providing more one-on-one time than I can possibly provide in my face-to-face classroom on campus.

What happened to previous "revolutionary" educational media? Why did things like educational TV, film and video, or even programmed learning fail to profoundly change education in the way online and distance learning technologies have changed education? I contend that the answer lies in the intent of the use of such media. The intent seems to have been to "teacher-proof" education and learning. To make learning into units of delivered knowledge, which by the way, is very easy to match to a standardized test: deliver facts -> test facts. The fear, and it seems now that it was not a well founded fear, was that educational TV would ***replace*** teachers. What happened was that teachers actually had to deliver more in terms of supplementing and modifying curriculum to meet the needs of their learners. The demand on teachers being even more knowledgeable increased and the need for more teachers grew.

As one who researches and practices online distance learning, I believe the growth in instructional management systems (IMS), new interactive objects and shared objects, the push for seamless integration of systems and coding standards has more to do with recognizing and supporting teaching and learning, than it does in teacher-*proofing* instruction. That is, the teacher-designer (Rogers, 2002) and the learners are the focus of the new technologies, rather than a program-controlled delivery system. The curriculum is important in terms of the desired competencies learners seek, but it is the teacher-designer and, increasingly, the learners who control and shape the learning environment independently and unbound by any particular technology or pre-programmed curriculum. It all boils down to learner needs, sound teaching, and appropriate instructional design, working with the characteristics of the variety of multiple media available to online learners to create an accessible and interactive environment for learning. The revolution is not only in being freed from the classroom, it is also being freed from *time*! Today, neither teachers nor learners are bound

by time. I have taught classes with students in Japan, Minnesota, Canada, and Colorado simultaneously and even had these students working in several small groups. Time no longer hinders communication or progress.

Such freedom is only possible when all aspects of true interactive distance learning are working together, what I have established here under the acronym of the TILDE: Technology, Instruction (teaching), Learning, Design, and Evaluation. All participants and the supporting media have to be present to create the kind of rich teaching and learning environment needed to make revolutionary 21st century learning possible.

The next revolution will occur through two different aspects of e-learning: (a) changing policies and practices that are still time and institution bound and (b) in changing the way we think about learning in this new environment.

In the P-K-12 world, time questions will take the form of asking what it really means to move from fifth grade to sixth, or what a graduating senior should know. How long should a school "year" really be in terms of sound pedagogy and not a throwback to our agrarian roots. Who provides the courses? In higher education, we will also question what an academic year really is, and how we should think about a two-year vs. four-year degrees, etc. Are we about teaching competencies or marking seat time? Are we interested in graduating more qualified people in, say, health care, from any one particular institution or can we work collectively to ensure a high graduation rate of highly skilled health care workers? If funding were not dependent on enrollment counts (FTE), would we really care who ultimately grants the degree?

These questions are being asked today, but the answers have not evolved beyond those encountered by our time-traveling teacher from 100 years ago: use standardized tests (most often focused only on factual knowledge and word recall) to determine knowledge gains and points in time on the academic calendar to "move on" to the next grade or to graduate out of school altogether. Or, in the case of higher education, remain competitive with other institutions as a result of funding policies that reward headcounts over collaborative programming.

The second aspect, changing the way we think about learning, is addressed in the next section.

THE CURRICULUM IS THE CURRICULUM IS THE CURRICULUM?

Distance learning, specifically in its online form, tends to be a bit "split-minded" like the TILDE. That is, more traditional face-to-face (F2F) instruction is still perceived to be somehow better than distance learning. The assumption is the curriculum is somehow changed in non-F2F instruction. And the *quality* of distance learning is always in question, with the assumption being that quality is present only in the F2F version of the course, thus setting up a false dichotomy. My response to all of this is always to say quality is quality. Let me paraphrase Gertrude Stein: the curriculum is the curriculum is the curriculum! Or is it?

One of the entries in this volume is contributed by Donald Norris who has captured the essence of the e-learning revolution in education. At one point, Norris says:

When it comes to online learning, we have set our sights too low, by far. We have largely digitized our existing approaches to learning – paving the cow paths, as it were. Most practices have focused on existing learning relationships and experiences, rather than on new experiences and value propositions that could be created for students, faculty, staff, and other stakeholders. Many institutions have failed to see e-learning infrastructures as part of emerging institutional and system-wide infrastructures that fuse academic and administrative processes, experiences, and value propositions. And many institutions have so far failed to create enterprise-wide strategies for leveraging these resources in new ways. Moreover, we have nurtured individual innovations with a lower case "i" rather than the systemic, enterprise-wide innovations that can truly leverage the potential value from enterprise resources, relationships, and practices. We must raise our sights and broaden our aspirations.

Norris is calling for teacher designers and indeed the whole educational community to move beyond simply reformatting what we already do! So, yes, we may make strong arguments about our on-ground curriculum and our online curriculum being the same BUT at the same time we may be short-changing our

learners by limiting ourselves to replication of the onground experience. This is a very different way of thinking about e-learning, particularly in terms of the demands of competency-based learning that is the heart of most higher education programs. It certainly flies in the face of P-K-12 realities of state and federal mandated standards-based testing!

But Norris and many of the other authors in this volume have also touched on the interrelationship of the various people, applications, and policies encompassed by the concept of the TILDE. Norris calls it the "electricity grid". Lindsay, Williams, and Howell do not give the interrelationship a name but do identify the emerging need for a more systemic approach to education through the analysis of current trends. Jo Paoletti discusses online learning communities. These authors and others throughout the four volumes of this encyclopedia set provide strong evidence of the changing nature of distance learning and an awareness of the interrelationship among TILDE applications and practices.

THE FUTURE OF DISTANCE LEARNING (IS IT ALL E-LEARNING?)

Recently, a mildly controversial article was published on the demise of elearning and innovations in distance learning titled "Thwarted Innovations: What Happened to e-Learning and Why" (Zemsky & Massy, 2004). Carole Twigg (2004) took up the challenge by pointing out the large number of flaws in the research methodology, the highly charged language, and the danger of this type of publication:

Because of the way it's written, this report will be used to attack online learning in a variety of settings. The Miami Herald's recent headline says it all: 'Study Debunks Value of Online Learning." It will be used as a weapon by those in higher education who refuse to acknowledge, in the report's own words, "that there is a need to substantially improve educational quality, especially for undergraduates…" (Twigg, 2004, p. 21)

The odd thing about all of this is that distance learning and increasingly the online distance learning known in education and in business training circles collectively as "elearning," is exactly what learners seek or even demand! Learners in the past had to rely on correspondence courses, later television courses, and now internet-based courses to attain certifications, post-secondary educational options (PSEO), secondary specialty courses in remote areas, company training, and full degrees. The whole history of distance learning is about *access* to education.

If we set aside for-profit educational institutions for a moment (though to some extent, ALL educational institutions have to be concerned with some margin of profit or they do not grow!), we know that the cost of offering online distance learning can be high. I am talking about well-designed, interactive courses and programs, not stand alone or self-paced electrified correspondence courses. The cost of development, maintenance, and personnel is large. This can be relieved somewhat once support services and most of the development is complete. Most indirect costs can be lowered and even certain direct costs, such as work-for-hire development, can be dropped once a course or program is up and running. And yet, the cost of building and growing such programs can induce fear and reluctance in many administrators and faculty.

Now let us put the for-profit institutions back in the mix. If, as suggested by the Zemsky and Massy report, elearning is in a downward spiral, why would such institutions wish to continue to grow? For one thing, the teaching function of educational institutions is profitable. This is the center of any institution of learning. Who are we if we do not teach? Are we community centers or libraries? Are we technical support points or resource rooms? Elearning is another way to allow greater access to the teaching function of an educational institution. It becomes a required mode, particularly when an institution is faced with population declines in rural areas or when there is a massive shortage of skilled workers in high needs areas such as health care, special education, mathematics, and science and technology. For-profit, public, and private educational institutions respond to these needs and issues in a variety of ways, including the creation of TILDE environments.

So, what is the future of this new shift in education? Specifically, what is the future of elearning? Twigg responded to this line of questioning in the context of looking at the survey questions from Zemsky and Massy's report:

The survey questions about direct usage are confusing enough because e-learning is never clearly defined, but things really get rolling when faculty are asked to predict e-learning's future. What are we talking about here: e-learning, e-learning products, e-learning software, e-learning activities, e-learning courses, e-learning initiatives? All of these phrases and more are used. Look at this question: "What is the capacity of e-learning to serve new markets?" What the heck does this mean? I think they meant to ask whether online courses and programs would attract adult students to the institution (or to higher education?) who would or could not enroll on campus. Or perhaps they meant to ask whether using information technology on campus would attract traditional age students to UT-Austin who might otherwise have gone elsewhere. Then again, maybe they meant to ask the faculty's opinion about the University of Phoenix's use of online programs to serve new markets. Frankly, I don't know what they were trying to ask. (Twigg, 2004, p. 11)

The questions, seemingly so straightforward, *are* difficult to pin down. Remember the TILDE? If we try to ask questions about learning in this new environment the same way we did 100 years ago, we will always end our conversations in confusion. We get mired in the extreme interconnectedness of teaching, learning, technology, sound instructional design, and evaluation. Simply substituting "distance learning" or "alternative programming" or "open university" does not clarify what it is that a complex learning environment such as online distance learning or elearning can include. Clearly, it is time to stop "paving the cow paths" and begin to think of distance learning in all of its forms in new terms. Let us ask different questions, questions that encompass and acknowledge the interrelatedness of technologies with teaching and learning and access to new knowledge.

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