Putting Learning Back into E-Learning

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"The last time I checked, learning still took place between people's ears. It doesn't happen in a machine."[1]

There are a number of ongoing debates about e-learning: Is it effective? Is it appropriate for every course and in every discipline? Does it cost more or less than a traditional college course? Is the quality comparable to the classroom's? How should the quality of e-learning be measured?

Such debates can be exasperating-not just because of the different points of view but also because there is no single definition of e-learning. To some, e-learning means a fully online course. To others, it means using information technology (IT) for portions of the course. Definitions found in the literature do little to offer clarity. The most widely agreed-upon fact is that the term e-learning typically causes us to focus on the technology or "e" part of learning rather than on learning itself.

If we were to focus on learning rather than on technology, how would we define e-learning? We might say e-learning involves the use of information technology to facilitate learning. With a more learning-centric definition in place, what would be debated? Perhaps debate would center on the potential of e-learning to bring quality education to individuals wherever they are physically and at whatever point in their learning they happen to be, thereby making it possible for every member of society to acquire the intellectual skills and expertise needed to become a productive member of a knowledge-based economy. As Richard Larson of MIT writes, *"A nation's most-precious assets are no longer buried underground; rather, they are between the ears of its citizens."*[2]

How, then, does the "e" part of e-learning enable those in higher education to prepare individuals to become productive members of the knowledge economy? Technology has the potential to enhance learning processes and to extend learning to those who might not otherwise have the opportunity. It can facilitate critical parts of the learning experience-such as dynamic representations of complex ideas, peer interaction, feedback, and access to resources-and scale the experience to an ever-broadening audience of learners. Perhaps more important, IT provides tools that challenge us to rethink the delivery of education, making it more relevant to all generations of learners.

What we know about learning is an important precursor to using IT. As much of the literature says, learning is socially constructed.[3] It requires participation and practice. Information is acquired; a context is formed. But just knowing is not sufficient; today's learners need to understand. When the learner can apply what is learned to new and novel situations, then understanding has been developed. Learning expert John Bransford has written extensively on the subject of effective learning, especially the transfer of learning from one environment to another. Bransford and his colleague Dan Schwartz suggest broadening our concept of transfer to include assessments of people's preparation for future learning. *"You need to give students access to resources and technology if you want them to use what they've learned to become even more effective. Using preparation for future-learning measures makes the value of many learning experiences visible."*[4,5]

If learning is a social process, what activities must be facilitated? Communication is certainly one. And for today's Net generation, communication may come as naturally by means of e-mail, instant message, or electronic chat as it does face-to-face. For people to communicate, it takes more than just making a connection; people must be able to express themselves. Expression can be verbal, written, or graphic – all of which can be facilitated by IT.

Richard Detweiler posits that the purpose of education is to create experts. *"What differentiates experts from novices is the existence of a conceptual framework that is buttressed by information."*[6] In other words, an expert is someone who has amassed significant content and knows how to organize that information in ways that reflect a deep understanding of the subject matter. Experts see patterns in information that novices miss. And an expert's knowledge amounts to more than facts; it takes into account context and applicability.[7]

To become an expert, one must learn to explore, to participate, to practice, and to assess. Acquiring information is a critical step in learning. Few of us would be nearly as efficient information gatherers without the Web. And the information available in digital form is robust – for instance, archives of manuscripts, art, images, or data that were never before available outside a museum or laboratory. Participation in communities of practice is enhanced by IT.

Colaboratories, for example, enable groups to share ideas, data, and debate conclusions – all of them activities involved in the development of expertise. Analysis applies not only to data but also to processes and personal improvement. Part of the definition of an expert is one who has the ability to analyze the gaps in one's understanding and advance one's own learning.

What about the mechanics of learning? Are there common, replicable activities that enable people to learn? It seems that there are at least five essential activities:

Exploration: One of the first steps for learners is to find information. Increasingly, information is in digital collections and made accessible through the Web.

Expression: Communicating what one thinks, feels, and sees is a fundamental part of the learning experience, whether that expression applies to scientific fact or artistic creation.

Interaction: An essential part of learning lies in interacting: interacting with other learners, with mentors or faculty, and with material.

Analysis: Analysis is part of the learning process; information gets analyzed, patterns compared and viewpoints contrasted. Learners are evaluated – or evaluate themselves – through assignments and tests; activities get measured, documented, and assessed.

Management: Learning involves the ability to manage material. Students need to know when to go to class; notes must be organized; and information needs to be sent and received.

Today, the tool most students use for exploration is the Web. Expressing oneself Is likely to be facilitated by technology, such as keeping an e-journal, sending e-mails, or blogging. Cell phones, instant messaging, and e-mail all are tools that facilitate interaction. Managing one's affairs is becoming increasingly computer based. Calendaring, keeping address books, and organizing notes or files typically happen via a computer or an electronic handheld device. And analysis relies heavily on technology-based tools to measure, evaluate, and document progress.

Learning involves the ability to manage material.

As IT has pervaded our lives and the lives of our students, it has become infused linto our learning processes, but if the focus is on the e-learning, do we risk diluting the focus on learning? Perhaps our most important task is to put the emphasis back on learning. But the "e" in e-learning can help us make education richer, more accessible, and more convenient. IT has provided us with the richest array of learning tools in our history, but those tools bring the greatest value when the focus is on learning.

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2) Richard C. Larson. *The Future of Global Learning Networks.* <http://www.educause.edu/ir/library/pdf/ffpiu011.pdf>
3) Peter Henschel. *The Manager's Core Work in the New Economy.* 1999. <http://www.newmango.com/01iftf/henschel.html>
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5) Microsoft Corporation. *Unlocking the Potential of Gaming Technology*. 2004. <http://download.microsoft.com/download/9/8/c/98c108c2-ade9-4c60-a938-d508eea54cdc/UnlockingthePotentialofGamingTechnology.pdf>
6) Richard Detweiler. *Teaching and Technology: Friend or Foe?* Keynote address of the International Roundtable for Library and Information Science, Kanazawa Institute of Technology, Kanazawa, Japan, July 2003, p.9.
7) Suzanne Donovan, John Bransford, and James Pellegrino. *How People Learn*. Washington, D.C.: National Academy Press, 1999.

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