Putting the Interaction Back into Interactivity

If it's online, it must be interactive. Well, not quite. If much of what passes for interactive learning falls into the page-turner category, it's because e-learning takes a limited view of interactivity and of learner needs. So what can e-learning designers do to win over increasingly restive learners—and clients?

Chhatrapati Shivaji Terminus (formerly Victoria Terminus) is, perhaps, Mumbai (Bombay) city's busiest railroad station. In a hectic corner of this nineteenth-century "Bombay-Gothic" structure stands a snazzy tribute to India's IT revolution. Forever surrounded by users and gawkers is an interactive touch-screen kiosk that provides information on trains, routes, available seats, and the status of wait-listed bookings. The people for whom this terminal is intended are not India's legion of code warriors and IT brahmins. Plumbers, electricians, laborers, daily-wage workers, people who are encountering a GUI —or even a computer—for the first time in their lives, are the audience. Watching them learn to use the service is a revealing experience.

The first-timer almost always keeps a measured distance. There is curiosity, awe, perhaps even a bit of wonder. And there is enough trepidation to prevent the person from trying to use the terminal, even if she is willing to hang around and watch it being used. Thus, the initial learning is, most often, "vicarious." In about a quarter of an hour, when the person has seen a few people use the computer, the reluctance gives way to a wary confidence. And soon, she finds that using the terminal is not half as difficult as she thought. This is not because the interface is super-intuitive, or the operations simple. But because there's real-time help available every step of the way. Onlookers, whether pros or vicarious learners, freely dispense advice, encouragement, and even the odd shortcut. The gap between technology and the user is, thus, bridged. Not through intelligent design, but through very human ingenuity and collaboration.

What does the e-learning designer take away from this? This is learning without instructor intervention and in an environment lacking in learning objects, conventional interactivity, elaboration, or progressive disclosure. This is learning that does not even depend on learning materials. The learner designs the learning and the learner implements it. Does this defy conventional instructional thinking? No, our theories are too smart for that. But it does challenge the way we approach learners, learner interaction, and interactivity.

It's been a few decades since a term such as *interactivity* tiptoed out of journals and into mass training consciousness. And it is, arguably, the most abused term in e-learning after *constructivist pedagogy.*

Interactivity once described a certain approach to learner empowerment, and to pull out a definition from the many that make up the woodwork, it stood for "the active involvement, participation, and engagement of the individual in the learning process." Educators and education theorists have seen interaction (and its derivative *interactivity*) as the defining component of the learning process. John Dewey, writing in 1916, regarded interaction as indispensable if the learner has to take inert information and construct it "into knowledge with personal application and value." Interaction as an idea has always been valued, even in the context of distance learning. Garrison and Shale go so far as to describe "all education (including that delivered at a distance) as essentially interactions between content, students, and teachers." But computers seem to have changed all that.

Computer interface design has long borrowed from the field of education—the ideas of Piaget and Bruner are known to have influenced UI theorists such as Alan Kay—and it did not take much for the term *interactivity* to be appropriated. Or for its sense to be attenuated. Computers opened up a world of possibilities in self-paced and distance learning, but interface and bandwidth limitations have also had the effect of curbing the instructional designer's

imagination. In the e-learning context, *interactivity* has primarily come to mean "the interaction between the user and the computer." Glorified navigation, in other words.

What should bother us is not this "loss of meaning," but that a once-radical approach to education has become an excuse for lazy instructional design. Consider the results of a 2003 eLearning Guild survey titled *Interaction with Instructional Content in eLearning Programs or Courses*. A whopping 84.4% of the respondents—all e-learning practitioners—have put down "click on object or text to reveal information" as a type of content "interaction" they routinely use. Other such choices include, "hypertext links to other pages inside the course or program" (75.4%), "hypertext links to other pages to resources outside the course or program" (73%), and "choice of path and sequence of information" (66.4%).

As the results of the survey suggest, what often passes for "interactivity" in many e-learning courses is mere information retrieval. On-screen navigation and clever devices such as hotspots and pop-ups have long been used to elevate garden-variety page-turners to the status of "interactive" learning. But the learner—and crucially, the e-learning buyer—has begun to see through this feint.

A Forrester analyst group survey, quoted in *The eLearning Developers' Journal*, showed that "the most common response to the question, 'What obstacles limit online training?' was simply lack of interactivity. Most respondents likened their Web-based learning experience to a workbook or manual with a few quizzes added." And this is no voice in the wilderness. Listen to barroom e-learning talk and you will often hear dismay at user-feedback reports that complain about the lack of interactivity in a program that had more than its fair share of progressive disclosure devices and multiple choice quizzes.

The drums of disquiet have been getting louder and the industry has been forced to respond. The current enthusiasm for simulations, avatars, and game-based learning is a sign of this. By itself, the development and dispersion of these "technologies" is a positive thing. It suggests a greater involvement of the e-learning industry with learner requirements and adds to the array of instructional tools at a designer's disposal. But, as technologies go, these don't go far enough.

Interaction has traditionally been classified into learner-content interaction, learner-technology interaction, learner-instructor interaction, and learner-learner interaction. As designers of computer-based learning, we have dwelt more on the first two types of interaction and often neglected the latter two. The reasons for this are both definitional and historical.

"Self-paced" learning—by definition—does not require us to take either instructors or other learners into account. This habit, developed over the last decade-and-a-half of designing computer-based learning, has been hard to shake off, and applications such as virtual classrooms and e-tutoring have found few takers, especially in the corporate training domain. Security concerns and the "sensitivities" of corporate clients have prevented us

from leveraging technologies such as instant messaging and bulletin boards that facilitate interaction between learners.

The other reason learners' interaction with instructors does not feature in our calculations has to do with the way corporate training is now organized. Ever since computer-based teaching became the "cheaper" alternative to the omniscient trainer, there has been a tendency to view instructors as mere facilitators, and therefore dispensable. With PCs replacing both the trainer and the classroom, the vital element of human interaction has begun to disappear from corporate training.

And learners are complaining. Here's what a senior executive of a large corporation had to say about an e-learning course he took: "With no interaction with a course tutor or other delegates, I found the subject matter tedious and hard going. I appreciate that I need to complete complete [the course] but this did not 'make it live for me' and with no opportunity to check my understanding with an expert, I felt I could [have] achieve [d] the same level of understanding by reading a workbook. Sitting at my desk in an office environment was not conducive for learning. I've got nothing to refer back to in terms of… interaction/ group discussions, which I would recall later…"

Self-paced learning is not easy, and the lone learner is a lonely learner. However, trainer-less training is here to stay. Much as we would prefer it, clients are not going to change their staffing policies to suit instructional approaches that privilege learner-instructor interaction. But, we still can mine the rich vein of possibilities that "collaborative" learning has to offer.

E-learning courses that encourage collaboration between learners enjoy many advantages. Perhaps the most valuable aspect of learner collaboration is that it can make up for the lack of immersiveness in an e-learning program. When learners fail to complete e-learning courses, it is rarely because they think the subject matter is not relevant to their experience or will not deliver value. It is because the course in itself does not motivate learners to carry on from topic to topic and module to module. As e-learning developers and buyers know only too well, immersiveness often has a directly proportional relationship with the cost of developing an e-learning product. One does not require even the back of an envelope to realise that developing a multi-path simulation will cost very much more than creating a traditional Web-based training program. Collaborative learning, especially in the e-learning context, is a great deal cheaper than programs that are high on immersiveness. As value-conscious corporations seek to economize on their training, there could not be a better reason than this to opt for collaborative learning methods.

Learning in collaboration with other learners is no different from working along with other people. Learning groups that proceed by discussion and by helping each other clarify ideas and concepts gain from the multiple perspectives brought to the table by different members of the group. This doesn't just enable faster learning, but by making the learning more meaningful it ensures that

the motivation levels of learners remain high. As studies have shown, more learners complete the courses they take when a measure of collaboration has been thrown in. Contrast this with a "self-paced" learner who says that she "found that I wanted to just click quickly through the screens without reading them thoroughly."

However, collaborative learning, especially in the e-learning domain, poses unique challenges for instructional designers. While the tools of collaboration—online forums, chat rooms, virtual classrooms—have long been available, instructional designers do not have much experience in harnessing these tools for the purposes of training. However, the greater challenge designers face is in the blending of learner-content interaction with collaborative interactions. Traditional e-learning gives instructional designers much greater control over the learning material and the learning delivery process than collaborative learning techniques do. To cede a part of this control and to allow learners to "construct" their learning will be a difficult act.

But, we need to remind ourselves that interactivity is not about putting the learner in touch with the learning material, but with herself. Learners, especially those in the corporate context, are often smarter at determining their own learning needs than we give them credit for. We often tend to over-estimate the "learning" that the content needs to deliver in order for learners to assimilate it.

Motivation, engagement, and immersion, the noble triarchy that govern our business, are all to be found within the learner, and collaborative learning is as good a means of exploiting these "resources" as any. For e-learning design to fully address the learner's needs, we must leverage technologies that unlock the richness of learner-instructor and learner-learner interaction. As many e-learning developers have found, satisfying the online learner is not an easy proposition—it requires imagination and the willingness to relinquish a degree of instructional control. But give her the opportunity, and she can be as ingenious as the swirling crowd of "learners" at the Mumbai railroad station.