Just-in-Time Education: Learning in the Global Information Age

The problem with experience, to paraphrase American baseball player Vernon Law, is that it gives the test before the lesson. Students either spend countless hours in classrooms acquiring knowledge that isn’t applied until years later (if at all) or they are tested by experience before they even have a chance to learn what they need. Wouldn’t it be much better to get the knowledge when and where they need it—in real time?

Wharton marketing professors Jerry Wind and David Reibstein think so. In a new paper titled, "Reinventing Training for the Global Information Age," they lash out at the traditional educational model and simultaneously propose a new model for management education. "Knowledge is the new source of competitive advantage," Wind and Reibstein say. "Training, therefore, is not peripheral but a central activity of successful 21st century firms. Companies need radically new knowledge to succeed in an environment in which whole industries are created and destroyed or unalterably transformed by relentless technology, competitive shifts and changing demographics."

It isn’t as though companies are unaware of this challenge. After all, they spent more than $60 billion on training in 1998 alone. Wind and Reibstein wonder, however, whether companies are getting true value for their cash. "Throwing thousands of managers into classrooms or passing out CD training programs doesn’t mean that knowledge is actually transferred or that the knowledge conveyed is what managers will need to succeed in the future," they argue. Business leaders now increasingly view the billions they spend on training "not as an employee perk but as a strategic investment, and their concern is how to increase the return on the growing training budget."

What’s wrong with the traditional educational model? According to Wind and Reibstein, that model delivers standardized content, in a discrete time and place, usually in a passive setting. In other words, a professor in a lecture hall imparts knowledge to a large number of students, who may be briefly engaged in discussions but are mostly passive. The lecturer also uses a one-size-fits-all approach, since the content of the lecture remains the same for each student regardless of his or her individual needs. This model has worked well for centuries, however, in part because it is efficient for teachers. Its focus is on teaching rather than learning.

Wind and Reibstein propose a new management education paradigm that changes this approach. Their model attempts to go from being a supplier-driven system that works efficiently for the teacher to a consumer-driven system that works effectively for students, making learners active participants or "co-producers" in the educational process. The new model focuses on learning rather than on teaching. "Companies can use technology to create just-in-time learning and decision support systems that harness and disseminate the knowledge of the organization and help managers make better decisions while learning," say Wind and Reibstein.

According to Wind and Reibstein, the new model achieves its goals by moving from standardized to
customized content, from discrete time and place to anytime and anyplace delivery, and from passive lecture models to interactive and applied learning. Instead of squeezing managers into the constraints of educational programs, the new model focuses on designing education tailored to the needs of students.

How would all this work in practice? Suppose, for example, a manager going through a decision support system incorporating an educational component though is asked a question about "price elasticity." Suppose further that the manager doesn’t fully understand the concept. The system immediately introduces a learning module that explains the concept before returning to the decision framework. The education comes at the same time as its application in the real world “the test” anytime and anywhere.

Wind and Reibstein say that the primary shifts in the new paradigm occur along three dimensions:

- **From Standardized to Customized Educational Content:** Where traditional programs offer standardized content calcified in specific courses the new paradigm should offer customized knowledge tailored to the backgrounds, interests, learning styles and motivation of the student.

- **From Passive to Active Learning:** The classroom model of education, and even some CD-ROM and online programs are based on a broadcast model in which knowledge from the presenter is communicated to the student. The new model is active, experiential learning in which students are presented with real-world problems and challenged to find solutions in context.

- **From Fixed to Fluid Time and Place:** Traditional learning is delivered in a specific location at a specific time, presumably to amortize the "set-up" time for a course. The new technology allows students to learn anytime, anyplace and in any increment of time. Institutions need to change their educational models to deliver this just-in-time learning.

In addition to developing this theoretical model, Wind, who also directs Wharton’s SEI Center for Advanced Studies in Management, is leading an attempt to create such a system in practice. Known as the Wharton e-Fellows program, he says it "illustrates the new paradigm in action." The program aims at creating a virtual community that lets participants engage in life-long learning with faculty and other Fellows. "Most of the electronic interaction among the fellows will involve customized, on-demand education," says Wind. "Through projects, shadow projects and action memos, we will focus on action learning and immediate impact."

Does the emergence of new educational paradigms mean that the traditional classroom is dead? Just as e-business leaders are finding that they need a combination of "clicks and bricks," Wind points out that educators are creating hybrid models, combining localized, face-to-face interactions with more customizable and portable components. The e-Fellows program, too, will have a hybrid model. "This is the first step towards creating a general decision support system that managers could use anytime and anyplace for just-in-time learning," says Wind. "Companies also can use the platform to share their specific knowledge across the organization."

Will the new paradigm work? It is too early to say, and Wind and Reibstein admit that experiments often "open the possibility of making mistakes." Still, they believe that organizations must constantly explore new ways to increase the knowledge of their employees, even if this involves acting in ways that require courage and commitment. "The only truly secure position in today’s turbulent environment is to assure the organization can consistently provide value by adapting to and driving change in the environiment,"
they point out. "Training programs have an opportunity to substantially increase the value they deliver, but only if they can rise to the challenge of reinvention."