

The **VIRTUAL** Classroom

BY TAREN GROM

Pharmaceutical companies are jumping on board the e-train as a way to better manage their internal learning initiatives

THE CLICK MAY NEVER REPLACE THE NO. 2 PENCIL, but e-learning is becoming the teacher's pet in terms of reach, content flexibility, access, and alleviating out-of-office downtime and cost.

"E-learning is gaining momentum, but as with anything new it still represents a relatively small percentage of the training budget for companies," says Ruth A. Vukelich, president of Plexus Learning Designs LLC.

E-learning can be considered as online access to all forms of knowledge, which could be as expansive as taking a Web-based course or registering online to attend an instructor-led course, or a CD-Rom, or collaborating with an expert online.

"Fewer than 10% of the learning interventions delivered today are actually e-learning events, if the e-learning definition is online learning or Web-based training," says Kim Woodward, VP of strategic marketing at Saba.

Even though e-learning budgets do not represent the lion's share of the resources allocated for learning initiatives, compared with just a few years ago the momentum of e-training is building. Increasingly, major pharmaceutical companies, including Bristol-Myers Squibb, Pharmacia, Aventis, Wyeth, Novartis, Lilly, Pfizer, McNeil Pharmaceuticals, and J&J are making significant investments in developing the infrastructure and technology to support e-initiatives.

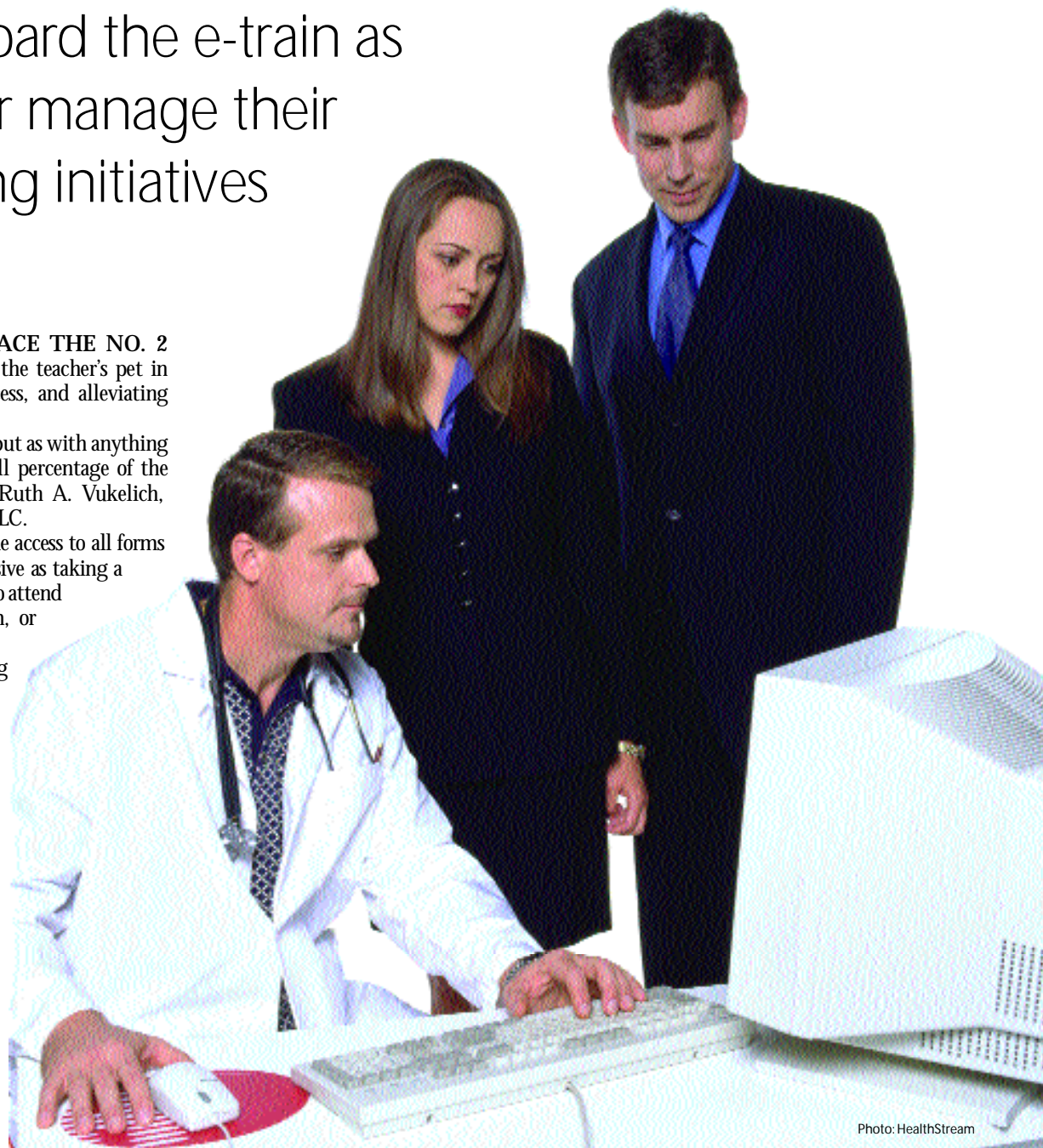


Photo: HealthStream

"Pharmaceutical companies are implementing e-learning solutions because they have to reach out to hundreds or thousands of sales reps and develop greater efficiencies in getting information to the field," says Steve Woodruff, VP of business development at Pedagogue Solutions. "The tidal wave of e-learning is inevitable."

Pharmaceutical companies are becoming more sophisticated as to the computer-based training systems they are implementing, which according to executives, have their root in the university setting.

"In 1998 and 1999, there was a resurgence of education in computer-based training in corporations, leading to a major push in 2000," says Sherry Gevedon, Ph.D., director, global training and development, at Kendle International Inc. "We believe e-learning is here to stay. Anytime there is a paradigm shift in any business process or initiative, the shift is solid. We'll never go back to a 100% instructor-led learning environment."

ENTERPRISING Ideas

"Companies are expanding their training options," says Peter J. Sandford, president of Gravity Shift Solutions. "Because of the need to constantly, and consistently, train and educate employees, the pharmaceutical and medical industries are really great examples of where e-learning can be successful."

The big pharmaceutical companies, having attained a comfort level with the technology of e-learning, are moving past implementing solutions for a single division and are starting to standardize e-learning platforms across all divisions as an enterprise-wide, or even global, system.

"The top pharma companies are either about to make those decisions or are in the process of migrating forward to platforms that can serve sales training, R&D, clinical research, and other areas," Mr. Woodruff says.

This is a dramatic step forward. Previously, companies had multiple platforms operating with little consideration as to what individual groups within the operation were doing.

"Before we started working with one client, it had seven different learning management systems in place," Ms. Woodward says. "There was one for employees, one for new sales trainees, one for IT, one for regulatory, one for customers, etc. In that mass was a lot of waste, even in the simple stuff such as multiple people administering the different systems. By consolidating the systems into one enterprise system, fewer people were needed, there wasn't a need for multiple pieces of hardware and software, the company could eliminate duplicate content creation, and consolidate its purchasing power."

Because of the many inefficiencies to the silo approach in implementing and developing e-learning, many companies are trying to pull disparate functions under one common umbrella to drive those efficiencies across the organization and beyond — to their customers, partners, and suppliers.

"Extending the knowledge about a new drug or device to the actual user of the product is critical to its success," Ms. Woodward says. "In addition to looking across the enterprise, companies are looking beyond their own walls to who they need to touch to ensure the success of their products or services."

There is a tendency to equate e-learning with a small "e," meaning electronic learning, which according to Steven Teal, director of e-learning at Bristol-Myers Squibb Co., does not

address the business capabilities of an organization. So, when Mr. Teal talks "e" he means a big "E" or enterprise learning.

"We are trying to build a capability across the entire company to gain strategic advantage in the marketplace," he says. "This can be equated to the human-resources policy on recruiting and retention or to the knowledge-management policy around intellectual capital or to e-business in the CRM strategy."

Soon after assuming the role as head of e-learning at Bristol-Myers Squibb, Mr. Teal began redirecting conversations about technology to ones about building capabilities.

"There are still a lot of people trapped in the world of technology," he says. "They want to talk about the latest LMS, but they miss the complexity of what has to be done to make it all successful. We're not just looking within certain silos, which still is very prevalent in the industry. We are building a virtually integrated team. We are centralizing those things that are common to all of those silos. The LMS, the metadata standards, instructional design standards, compensation rewards, certification — all of these elements that need to wrap around the initiative, which people ignore or forget."

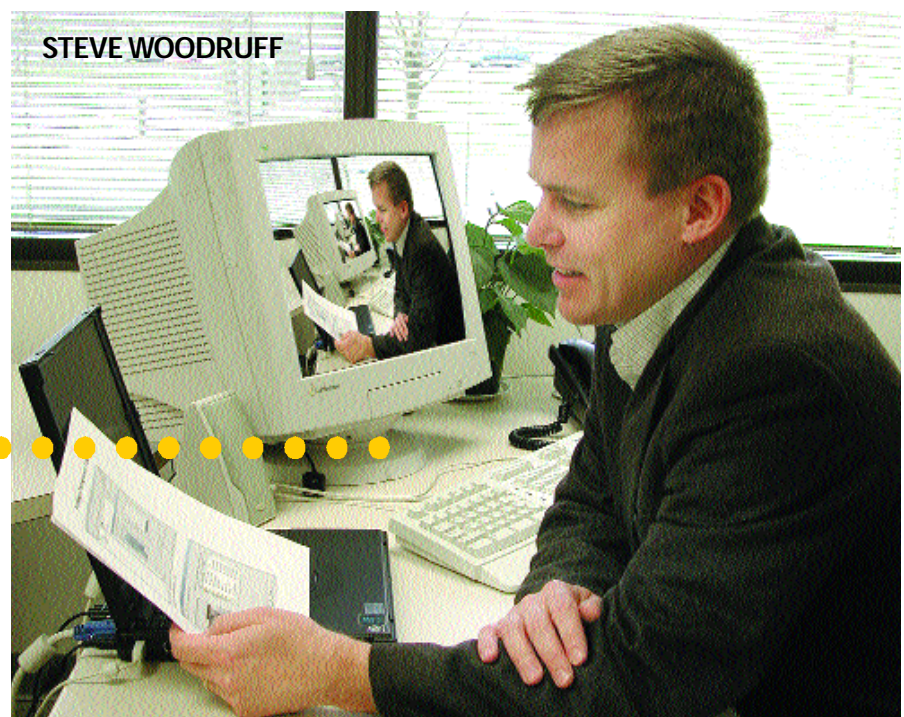
An enterprise-wide initiative allows for a central repository for all media elements in training, from the beginning of the life cycle to the end, but everybody has to be on board, from marketing to sales to manufacturing.

"We had 27 animations for cardiovascular disease," Mr. Teal says. "It was unfortunate that no one knew about the other ones being developed. I'm sure we don't need just one animation, but I know we don't need 27. The questions become how much extra money did we spend, and how much extra time did we expend when we didn't need them? E-learning can raise a lot of other questions and discussions that have the potential for driving revenue and efficiencies."

According to Debra Newton, president of Newton Interactive Inc., companies don't always recognize the level of planning and commitment that is involved, or the budget required, before taking the leap into e-learning.

"It's a long-term process," she says. "To make e-learning programs successful in the corporate environment, there needs to be an awareness campaign — e-mails, flash animations, reminders, or voice mails to the end user that reinforce the e-learning program. Until people embrace this as a new tool, it's going to take awhile to change their behavior."

Learning should be about driving business results through behavior



Many companies are at a point where they are implementing major platforms and are **HUNGRY FOR CONTENT.**



• **DEBRA NEWTON**

E-learning has moved to a combination of what we like to call the **BLENDED APPROACH TO LEARNING**. We can enrich the learning experience through games, animations, and interactive exercises. With Web-based learning, we can offer real-time feedback on competencies and objectives.

change, and e-learning should provide people with the information they need to do their job. Corporations that focus on learning can drive performance and improve productivity.

"The biggest thing we, as an industry, need to continue to beat the drum about is that learning drives business results," Ms. Woodward says. "E-learning is not a discretionary purchase, it's a business-critical purchase."

Kendle International is one such company that early on recognized the advantages of an e-learning environment for driving business. The company launched eKendleCollege, which introduced e-learning into Kendle's working environment, enabling its associates to explore continuing educational needs.

"There was no leadership in the industry when Kendle first started entertaining the idea of moving from a corporate university, which was very effective, to an e-learning environment so we could offer training anywhere, anytime, to our associates that support the core business of clinical research," Dr. Gevedon says. "We are still the first CRO to market, and the first company in the pharmaceutical industry, to have a comprehensive e-learning solution. There are companies that claim to have e-learning, but usually they only have bits and pieces of what we have five or six different dimensions of."

According to Laura Benson, manager of Pharmacia Corp.'s Oncology University, there is a definite need for cost-effective solutions that work across the company, the franchise, or the division.

"We have a number of products that influence breast cancer, so a significant portion of our content deals with that disease," Ms. Benson says. "While no disease is ever a single scenario, we try to develop a well-rounded program that reaches across all of the disease states."

Pharmacia's Oncology University was launched in January of this year, so feedback has been limited, but the responses that have come back from the field thus far have been positive.

"The University allows us to communicate with our people outside the U.S. to meet their needs as well," Ms. Benson says. "As a global company, our people in Japan, Saudi Arabia, or Germany can log on and see the same information as our U.S. staff."

It's All in the **PLATFORM**

"On the technology side, the challenge is how to make vast amounts of knowledge, content, learning, information, and resources available to large groups of highly dispersed people," says Paul Henry, executive VP of

sales and marketing at SmartForce. "That's where the Internet-working architecture comes into the actual delivery of the learning."

The most common platforms being adopted are learning management systems (LMS) or content management systems (CMS). These systems essentially provide tracking, training, and database warehousing.

"The industry standard always has been print modules, but what we are finding is that e-learning can translate into a full-learning management system," Ms. Vukelich says. "We're seeing more e-learning systems taking the shape of what had been print modules, now we are seeing real e-learning systems."

There are statistics that support the efforts being put behind e-learning. However, according to Mr. Sandford, one of the challenges the industry faces relates to hardware. Great programs are being created but can the salesforce access them?

"Our challenge is to develop programs that will work well in specific client environments," Mr. Sandford says. "We need to think through the limitations of current technologies and develop programs that are useful today, and tomorrow. E-learning technically still is a new environment. And, there are advances being made daily that allow the technology to be more adaptable."

A **BLENDED** Approach

E-learning will never 100% replace face-to-face interactions. Thus, companies are developing a blended approach, which comprises the use of some electronic form of course-ware, whether it is Web-based or a CD-Rom, together with live instructor-led training, workshops, and traditional paper-based materials.

"E-learning has moved from merely words and graphics on paper to a combination of what we like to call the blended approach to learning," Ms. Newton says. "In addition to having convenient and easy to carry paper-based learning programs to supplement a computer-based program, we can enrich the learning experience through games, animations, interactive exercises. With Web-based learning, we can offer real-time feedback on competencies and objectives, which were not available before. In addition, now feedback can be instantaneous. This allows us to modify questions, address concepts, and tailor the training based on real-time feedback."

Tailoring the training is important, but just as vital is determining what training modules are appropriate for the e-environment.

"Because corporate America is still tried-and-true instructor led, one of the biggest challenges the industry has is to determine what material is appropriate for an online delivery and what material is best delivered in an instructor-led mode," Ms. Woodward says. "For example, a budgeting course easily could be delivered online. Whereas a course on developing presentation skills usually is best-suited for an instructor-led approach."

A blended approach also allows the training of people who inherently learn better in different ways. People learn either by doing or by watching somebody else do. Some people may learn better from self-study and then taking a test, while others may learn best from an e-learning course.

“There is a need to have all forms of learning,” Ms. Woodward says. “Blended learning is important because, first, certain subjects are best delivered in certain environments. Second, people learn in different ways. Third, organizations and even countries, have different learning cultures.”

E-learning may have advantages over traditional methods. Some data reflect that people’s retention and success rates are higher with e-learning because they can go back through the concepts they don’t understand at their own pace until they do. Whereas an instructor has eight hours to deliver a course and typically will not repeat over and over the concepts being conveyed.

E-learning also allows for instantaneous results. Rather than having to wait weeks to evaluate scores, trainers have real-time access to learner responses.

“Information about a new product launch, a change in market condition, a product recall, or a new clinical study is constantly being imparted,” Ms. Newton says. “How long does it take to get that information out to the salesforce? How long does it take to find out if they got the message? Before, if a test had to be run, it was done via phone, and it would take two weeks to get the reporting. Now feedback can be instantaneous.”

Despite higher retention rates and a self-paced learning environment, e-learning faces some resistance from the actual learner.

“In certain circumstances, some adult learners don’t want to participate because of a lifestyle decision,” says Leo Garneau, director, training and development, McNeil Consumer & Specialty Pharmaceuticals. “Or they participate reluctantly and only because their profession or employer requires them to participate in the process. Or, people simply are afraid of the technology, which we still find is a fairly



PETE SANDFORD

large percentage of the population in spite of this being the 21st Century.”

There are ways to incentivize people — make e-learning part of their job description, require them to take certain courses at certain times.

“At McNeil, we have requirements for people to learn continuously,” Mr. Garneau says. “As a result, the principle place they can get that learning, short of practical application, is in our e-learning environment.

“As an organization we have responsibilities to our e-learners to provide a user-friendly environment that is easy to navigate and speeds the process, so the learning curve is decreased,” he says. “We also have an obligation that the ‘e-learning bytes’ are served up in small enough pieces that the learner doesn’t get bored, but yet they absorb the information in a way that’s going to allow for the highest level of application.”

Thus the e-learning environments have to be much faster, much shorter, much more succinct, or people will disconnect, and once they disconnect, it’s very difficult to get them back, Mr. Garneau says.

The balance of the right technology and the right content is what will make an e-learning program successful, Mr. Sandford says. “E-learning is evolving and adapting. But if the people who it’s being designed for don’t accept its advantages, then it’s not going to work.”

Generating buy-in for an e-learning project is a cultural change for organizations, and can dramatically alter the entire ethos of the company.

“Despite the fact that we are in the 21st Century, there still is a tremendous amount of culture change that needs to happen before people will embrace new forms of learning, new approaches to learning, and take responsibility for their own learning versus having their manager send them on courses,” Mr. Henry says. “The cultural challenge is how to make people want to learn, make them want to take responsibility for their own learning, and make them want to use and exploit e-learning as a way to enhance their knowledge experience.”

The vast majority of enterprise training still happens in a classroom setting, where there is a greater comfort level for the learner.

“There is a myth that face-to-face learning is somehow better than electronic learning,” Dr. Gevedon says. “I believe for a couple of reasons that the quality of e-learning is indeed better than live, face-to-face training. One, the e-learning process forces the extraction of any extraneous material from the content — resulting in knowledge in its purest form. Two, e-learning with the click of a mouse allows companies to bring hundreds, if not thousands, of people together to participate in a course.”

The Purpose is to **RE-PURPOSE**

For many areas of learning, there is a layer of content that remains fairly static, and that consistency is being translated into savings when converting to e-learning. For instance, courses can be built for anatomy and physiology, and that content remains basically the same across all training needs within the company. A heart is a heart, no matter if the participant logging onto the system works in the U.S. or Europe. For companies that develop and supply learning content the same premise holds true, whether they are designing an anatomy or physiology course for Pfizer or Aventis.

We need to **THINK THROUGH THE LIMITATIONS** of current technologies and develop programs that are useful today, and tomorrow.

“E-learning for the pharmaceutical sales industry can be thought of in terms of layers,” Mr. Woodruff says. “Some of those layers are relatively constant and can be moved around fairly freely. On the other hand, some of those layers are highly proprietary and can’t be re-purposed from one company to another, for example, marketing content that is built around the launch of a new drug, or course content derived from a particular selling-skills program.”

From the instructional design content development perspective, the ability to re-purpose the content is a huge advantage. Because of the heavy regulations that the pharmaceutical industry is guided by, developed content that has gone through the painstaking process of ensuring its accuracy, and that meets all the regulatory requirements, eliminates the need for companies to keep reinventing the wheel.

“The ideal situation is to have that content developed once, and then have it reused or re-platformed in a variety of different areas,” Mr. Sandford says. “And, once that content is developed, the challenge is managing the content. Determining how the data are managed and how information is re-purposed is a big part of the e-learning paradigm.”

Hungry for **CONTENT**

E-learning has evolved into an entire application infrastructure around the central component of content.

“Technology has evolved beyond recognition from a few years ago, to



The **INDUSTRY STANDARD** always has been print modules, we are finding that e-learning can translate into a full-learning management system.

“Companies are suffering from information overload,” says Jeff Green, group director of marketing, integrated market research solutions, at IMS Health “Increasingly, the name of the game seems to be not just providing more data and more information but providing context, insight, and the ability to apply the data more directly to business issues and business questions.

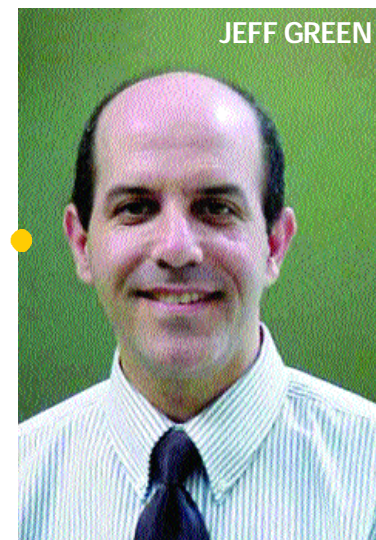
“Companies that take advantage of e-learning are companies that can identify trends and dynamics and figure out ways to simplify procedures,” Mr. Green says. “Companies need to design ways to take complex sets of information and present them in a way that’s more than just data, but offer

intelligent solutions for end users.”

Companies such as McNeil are taking that data and building excitement in the e-learning environment through interaction, games, and animation. “We are building a lot of games into the learning environment, so it’s not static text,” Mr. Garneau says. “There’s a competitive aspect to the e-course because of the game component. Ultimately, we want to use the e-learning systems to create a competitive learning environment from which an individual or a team could accumulate points that would be redeemable for cash or prizes. The population is stimulated by competition, therefore their learning segments are more productive and probably richer than if they were just reading the information.”

Productivity is of paramount importance, particularly as time continues to be an issue.

“People don’t have time to plough through 300 pages of very static information,” Ms. Newton says. “Through e-learning, content can be animated, key points can be summarized, and as the learner proceeds, they are asked for feedback. They feel that they are involved in the content. They are responding to Q&As, they are interacting with games and activities — all of which keep the learner interested. We work with clients to tailor the content not only to their needs and objectives, but the end user’s technical specifications and comfort level.”



the point where what we actually mean by delivering a course online has changed dramatically,” Mr. Henry says. “No longer are we talking about passive, very structured, very rigid online courses, but a very rich and dynamic environment in which all types of content applications can happen, be it instructional-type content presented online to the learner, online seminars, educational resources such as White Papers, thought leadership, or online simulations.”

“Many companies now are at a point where they are implementing major platforms and are hungry for content,” Mr. Woodruff says. “A learning management system is not that interesting to log onto; there has to be something to engage people.”

The value of learning systems starts with a sound instructional design strategy and then top-quality content that is delivered at an appropriate level for the audience.

“Once these criteria are established, the learning can be blended with the most appropriate delivery technology or methodology,” Ms. Vukelich says. “The challenge is, as with all new technology, to not lose sight of the fact that the content is more important than how it’s delivered. The e-learning system should enable the engagement of all the learning senses, but the ultimate goal should be to enhance knowledge retention for the learner.”

Providing the right content is incredibly important, especially in today’s business environment where there is so much information available, that at times it can be overwhelming.

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DR. SHERRY GEVEDON



There has been a paradigm shift in education, specifically corporate training. Anytime there is a paradigm shift in any business process or initiative, **THE SHIFT IS SOLID**. We'll never go back to a 100% instructor-led learning environment.

STRIKE UP the Band

The over-riding barrier to moving to the next level of sophisticated programming for companies is the lack of sufficient bandwidth to support heavy graphics, animations, or virtual role-

playing programs.

The issue of bandwidth is particularly challenging as it relates to sales training. Reps most often use laptop computers that don't have the capacity or memory to upload huge amounts of data through a dialup.

"The idea of sitting online and taking a course, particularly one that has to come through a modem, and therefore cannot be as engaging as a live presentation, is one of the major challenges involved in designed and rolling out e-learning," Mr. Woodruff says.

According to Ms. Newton, as technology improves it's going to allow for an even more robust learning experience.

"As bandwidth grows, imagine having role plays in real-time via the Web," she says. "Imagine role plays that immediately can be implemented according to changing market conditions."

Some companies are addressing the issue of bandwidth by building a technology that invisibly moves data on and off the hard drive.

"Part of the program runs locally on the hard drive, not off a CD-Rom, and it is updated invisibly," Ms. Newton says. "It's not an easy technology to implement, it takes a lot of time and planning."

It's only recently that laptops have had enough hard-drive space to accommodate this kind of technology. Today's capabilities are much greater than just five years ago, when there were a lot of promises made by vendors that they weren't able to deliver. But today, vendors that play in the e-environment are astonishing purchasers with their capabilities.

"They've created the software and the systems and the hardware, but the communications hardware can't handle it," Mr. Garneau says. "We have incredibly sophisticated databases, but because of the lack of bandwidth they can't be utilized to anywhere near their capacity or capability."

From a critical standpoint in terms of e-learning systems, because of bandwidth issues, which are expected to be fixed short term, many organizations create parallel systems, which double the cost. "There are so many negatives because of insufficient bandwidth, that a downward spi-

ral from an impression standpoint is created, therefore we don't do everything we have the capability of doing," Mr. Garneau says. "So, we create systems that are dummied down, which is inappropriate most of the time. Or we have to create parallel systems, which drive costs up."

And even though Mr. Garneau says the company's e-learning systems are yielding substantial savings on an annual basis versus the way things were done before, the savings are nowhere as significant as they could be if he didn't have to create systems in a parallel world.

"Essentially, with our learning management systems and knowledge management systems, we're writing tomorrow's encyclopedias today and putting them away and letting them create dust until we can use them."

Taking it on **FAITH**

As with any high-cost, resource-demanding, initiative, there's always the question of return on investment. Some basic metrics associated with reduced travel expenses may be determined, but for the most part measuring ROI for e-learning often remains an inexact science.

"ROI, at least in our sector, still is mainly an article of faith," Mr. Woodruff says. "Companies that have been very aggressive with e-learning (such as IBM, Dell, and Cisco), have had an easier time quantifying actual travel-time charges and expenses and have been able to show, in tangible ROI dollars, that e-learning has made a big difference."

Because ROI is difficult to quantify, except on the basis of cost savings for time out of field and travel expenses, many companies initially have not been focusing on the hard numbers but on changing behaviors and performance.

"Pharmaceutical companies are looking to developing a competitive advantage as opposed to just realizing cost savings," Mr. Woodruff says. "Again, there is a reasonable step of faith involved in concluding that they can gain a competitive advantage by giving their people rapid access to information on a just-in-time basis at their fingertips wherever they are, whenever they need it."



STEVEN TEAL

There is a tendency to equate e-learning with a small "e," meaning electronic learning, which does not address the business capabilities of an organization. So, when I talk "e" I mean a big "E" or **ENTERPRISE LEARNING**.

PAUL HENRY



ON THE TECHNOLOGY SIDE, the challenge is how to make vast amounts of knowledge, content, learning, information, and resources available to what are typically large groups of highly dispersed people.

According to Ms. Vukelich, the combination of the industry being ready and the technology being available now is allowing clients to start to evaluate the ROI.

"We have about 300% more e-learning courses than we did classroom-based training," Dr. Gevedon says. "Additionally, we've had a 45% reduction in travel costs, a 50% cost sav-

ings, and 50% of associates have accessed training."

Ms. Benson also anticipates a positive ROI for her company. "There is a need for e-learning solutions because they are cost effective. The world is shrinking. As a global company, time-zone issues and language barriers become less of an issue with online initiatives."

Even as online initiatives allow companies to cross borders effortlessly, a bigger ROI can be realized from changing a learner's performance.

"I'm interested if people went in and got what they needed to help them do their job," Mr. Teal says. "If that means that they came in and spent five minutes online for a one-hour course, and that's all it took to change their behavior to increase the business stream that's all I want them to get. They don't need to take the other 55 minutes. Return on investment is going to be evaluated by whether my person changed his

behavior to drive revenue in the company. It won't be around completion rates.

"We're still asking industrial-era questions of information-age technologies," Mr. Teal says. "The questions should be how many courses should be online and what is the right percentage of blending? Instead, we're asking efficiency questions, such as how much can be saved in reduced travel costs? I won't be able to shake out a clean ROI, but my executives understand the value we can bring to the table upon meeting certain expectations. We don't contract on return on investment, but on return on expectations."

According to Mr. Garneau, it's important to stay the course for those who believe in utilizing e-technology to help encourage learning to be more efficient, faster, and better.

"This can't simply be a fun project that dies on the vine," he says. "We have to be visionary enough to understand that where we are today is not where we will be tomorrow. And while tomorrow will have its own inherent set of challenges, we will have solved all of today's problems." ♦

PharmaVoice welcomes comments about this article. E-mail us at feedback@pharmalinx.com.

Experts on this topic

LAURA BENSON. Manager, Oncology University, Pharmacia Corp., Peapack, N.J.; Pharmacia is a top-tier global pharmaceutical company with a leading agricultural subsidiary

LEO GARNEAU. Director, training and development, McNeil Consumer & Specialty Pharmaceuticals, Fort Washington, Pa.; McNeil is a diversified OTC and specialty pharmaceutical company

SHERRY L. GEVEDON, PH.D. Director, global training and development, Kendle International Inc., Cincinnati; Kendle is a global provider of clinical development, regulatory/validation consulting, and medical communications services to the pharmaceutical and biotechnology industries

JEFF GREEN. Group director of marketing, integrated market research solutions, IMS Health, Plymouth Meeting, Pa.; IMS Health is a premier supplier of market research, business analysis, forecasting, and sales-management services to the global pharmaceutical industry

PAUL HENRY. Executive VP of sales and marketing, SmartForce, Redwood City, Calif.; SmartForce is an e-learning company that provides learning solutions that help enterprises achieve tangible business results

DEBRA NEWTON. President, Newton Interactive Inc., Pennington, N.J.; Newton provides innovative technology-based services that facilitate knowledge sharing, information exchange, and education within the healthcare industry

PETER J. SANDFORD. President, Gravity Shift Solutions, Princeton, N.J.; Gravity Shift develops Web-based and electronic training and marketing applications that enhance knowledge and communication

STEVEN TEAL. Director of e-learning, Bristol-Myers Squibb Co., Hopewell, N.J.; Bristol-Myers Squibb is a pharmaceutical and related healthcare products company whose mission is to extend and enhance human life

RUTH A. VUKELICH. President, Plexus Learning Designs LLC, Marblehead, Mass.; Plexus Learning is a privately held, technology-driven company that designs and develops custom learning systems primarily focused on the pharmaceutical and biotechnology industries

STEVE WOODRUFF. VP, business development, Pedagogue Solutions, Princeton, N.J.; Pedagogue Solutions is a pioneer in the development of Web-based training and testing systems for the pharmaceutical industry

KIMBERLY WOODWARD. VP of strategic marketing, Saba, Redwood Shores, Calif.; Saba provides human capital development and management solutions that consist of Internet-based learning, performance, content and resource management systems, business-to-business exchanges, integrated content, and related services