BY ELISABETH PENA

Learning to work with
E-LEARNING

As technology continues to make **high-speed communication a reality**, the industry is beginning to **take advantage of these tools** to teach and train. **Using the Internet in combination with traditional teaching principles**, companies can span great distances and disseminate information through blended learning to large groups of people in a fraction of the time it would take to physically deliver the same messages.

Whether a company is training its reps, or a brand team is coordinating a CME session, or a sponsor is developing investigator sessions, e-learning and e-training tools offer the industry a cost-effective and time-saving method to reach, and teach, the masses.

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e-CHALLENGES

HANGES. The biggest challenge is driving change management within pharmaceutical companies in terms of transitioning them from the traditional ways of delivering training to virtual training. Many companies have established e-learning departments to support e-learning initiatives for their internal enterprises, such as salesforce training. Most of these departments, however, are relatively small with limited budgets and don't yet have the infrastructure to support corporate change. The other challenge is that e-learning departments have a responsibility for internal training but are not responsible for using these solutions for the external enterprise.

JUST. E-learning has been oversold by many vendors. This technology strategy is just one solution among many. The current term is "blended learning." There are advantages and disadvantages to instructor-led training, print training, e-learning, and traditional media. But they have to be used properly in the proper situation. A few years ago, pharmaceutical companies wanted to put everything into an e-format. Today, some of these companies are backing off a bit after they realized that e-learning is fine and has its place, but they are not going to ditch other training applications.

BONTHRONE. There are a number of cultural challenges to achieving a wider acceptance of e-

learning into regular training and instructional processes. E-learning requires a major behavioral change. First, some training departments may be reluctant to adopt new technologies, including those associated with e-learning, because these represent a significant departure from what's been done previously. Second, there is a reluctance to change the pharmaceutical industry's practice of face-to-face learning. It is easy to talk about the benefits of an e-learning approach and the need to change, but it is not always as easy to gain immediate internal acceptance from a cultural perspective.

MANDELL. The challenge is not so much a lack of interest, but getting clients to pull the trigger on participating in these programs. Early on there is, almost without exception, interest by a brand team. But as people shop the idea around internally, they tend to gravitate more toward traditional programs, such as a teleconference program.

JOHNSTON. E-learning will no doubt be used in the future more extensively to influence physicians and other healthcare workers in their decision-making behavior. The question is how e-learning will be adopted and what other tech-

Keith Westrich
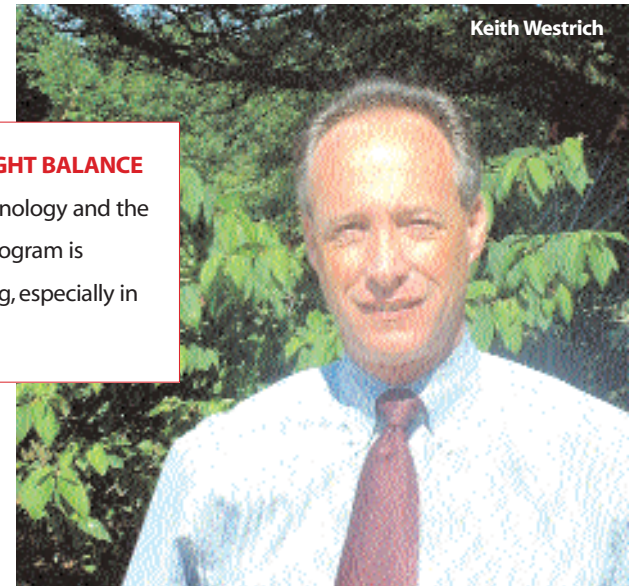
> **GETTING THE RIGHT BALANCE** between the technology and the overall training program is always challenging, especially in large companies.

nologies will be used, including synchronous tools, PDAs, CRM systems, and so on.

JUST. E-learning has to find its natural place and companies are still grappling with how e-learning blends into knowledge management, how e-learning can coexist or work well with print, and how CD-ROM delivery can coexist or work well with online delivery.

O'GUIN. One of the corporate challenges we face is how to blend e-learning with some other

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areas of training we have done. Pfizer has been the No. 1 training organization in the United States for the past two years, according to *Training* magazine, and we have achieved that excellence without a strong dependence on e-learning and technology-based training. Pfizer is dedicated to growing e-learning as part of its training and development. But we want to blend and align e-learning with the training being done with some of the other delivery models.

RACIK. The e-learning and the e-training departments need to be moved up the corporate ladder. E-training and e-learning have to become a corporate initiative and not something that is just pushed down to sales training.

AHERNE. From our research — we currently have a number of supply-chain e-learning programs with manufacturing companies — the biggest challenge expressed by users is a lack of time to access the e-learning. The general expectation of companies is that the bulk of the learning can take place outside working hours. The maxim that "you can learn on your own time" is obviously taken to its extreme. To institute successful e-learning programs, companies must set aside time during the work week and put a plan in place for users to engage in e-learning. Otherwise the company will not reap the benefits of the added productivity and increased job satisfaction that should normally accrue.

REECE. Aside from technical challenges, which are certainly significant, the greatest challenges with e-learning reside in two areas. The first involves the challenge faced by learners/participants to achieve work/life balance. Many times managers do not allow work time to be used to complete training, although it's very important that they do so to prevent push-back from participants. The second challenge involves ensuring participation and, more importantly, completion of training modules by learners. Because many e-learning programs are asynchronous, learners tend to drop out of training programs because they do not feel connected. It is important to recognize that learners have differing computer skills and, therefore, varying comfort levels with e-learning.

CLOPPER. One of the biggest challenges facing e-learning is acceptance. People are accustomed to traditional ways of learning — a facilitator in front of the classroom. E-learning, whether it's a self-paced or a videotape exercise, puts people in a different learning mode; and some people have difficulty transitioning from traditional to e-learning methods.

Terry Clopper

E-learning Terminology

ASYNCHRONOUS LEARNING. A learning event that takes place with the student and instructor participating at different times. Usually online tutorials.

AUTHORING TOOLS. Software tools designed for use by noncomputer programmers to create CBT/WBT training programs. LCMS contain authoring tools.

BLENDED LEARNING. Combining two or more different delivery modes within one training program. For example, instructor-led training with videotape or self-paced workbook with computer-based training.

COLLABORATION SYSTEM. A computer system that enables the development of Internet-based training programs, as well as asynchronous dialoguing. These systems work best with training programs that require a dialogue between students and/or a dialogue between the instructor and students and are used most widely in higher education.

COMPUTER-BASED TRAINING (CBT). Training programs that are usually delivered on a CD-ROM or downloaded from the Internet onto the desktop. See e-learning.

E-LEARNING. A learning delivery mode with an electronic component. For example, CD-ROM, Intranet, Internet.

ELECTRONIC PERFORMANCE SUPPORT SYSTEM (EPSS). A help system, typically embedded within the content of a software package, that provides assistance, as it is needed. Not considered training but a job aid.

LEARNING CONTENT MANAGEMENT SYSTEM (LCMS). A computer system that creates, deploys, and stores learning content. An LMS may contain an LCMS.

LEARNING MANAGEMENT SYSTEM (LMS). A computer system that is the central repository for training programs, student grades, and other learning-related activities (i.e., scheduling resources such as instructors and equipment).

SYNCHRONOUS LEARNING. A learning event that takes place while the student and instructor participate at the same time, but not necessarily at the same place. Usually facilitated by an online collaboration system such as Centra or WebEx.

TUTORIAL. A generic term that implies an electronic training program (such as a CBT or WBT) or a paper-based, self-paced workbook.

VIRTUAL CLASSROOM. Online, instructor-led training conducted through the Internet. Attendees view a presentation and/or a product demonstration through the Internet while listening to the instructions via a conference call or over the Internet. See Synchronous learning.

WEB-BASED TRAINING (WBT). An Internet-based training program, viewed through a browser window (Microsoft Internet Explorer, Netscape Navigator). See e-Learning.

Source: Terry Clopper, M.Ed., senior consultant, and Shawn Milheim, M.S., senior consultant, Barnett International, Media, Pa. For more information, visit barnettinternational.com.

> The more companies make e-learning available, the **LESS TIME NEW EMPLOYEES ARE SITTING ON THE BENCH** waiting for projects to come around.

HEALY. Most people enjoy their traditional training days out of the office with all the little luxuries of the hotel, the meals, and the "networking." Replacing that with a couple of hours at the desk in front of a computer screen can seem like a poor substitute. E-learning works best when there is a compulsion to learn, and that can be either an external or an internal motivation and when there is learning targeted to a specific need.

RACIK. The important thing with e-learning initiatives is to make sure that as the strategies are rolled out everything is actionable and builds on the previous module. The idea is to take the best practices of adult learning and behavior modification and use those insights to help trainees get the most out of a program. Companies must begin to look months and years in advance to what they want to accomplish; the goal is to train people to do things in the most cost-effective and efficient manner possible.

CONNELL. One of the challenges is the ability to assess the level of learning needed and tailor a program to a person's unique learning style. We are becoming smarter in our development of e-learning tools, as most tools provide visual and verbal learning clues. But people who learn best in an interactive environment are often left out or provided with minimal opportunities for interaction during the e-learning experience.

e-ADVANTAGES

CLOPPER. The more companies make e-learning available, the less time new employees sit on the bench waiting for projects to come about or waiting for training classes to occur. Early in my career when a new hire came on board he or she was asked to read manuals until another project began or the next training class started. With e-learning, employees become more

DANA DREVES

> E-learning presents a unique opportunity for executives to make essential investments to improve the core competencies within their organizations and **OPTIMIZE THEIR MOST VALUABLE ASSET — THEIR EMPLOYEES**.

competent, faster — they are in the field doing their jobs and increasing their value to the organization.

CONSTANTINE. E-learning definitely has the ability to shorten time to competency for anything from an IT project, to a new e-mail system, to a switch of products for the salesforce. If an e-learning course already is available, a company can get its salesforce up on a new product much quicker than if it had to organize an instructor-led program for 600 or 800 people.

REECE. E-learning can increase core business performance and competitive advantage by allowing transmission of small chunks of information that can be relayed easily across an entire field salesforce. For example, information about competitive products, clinical practice guidelines, or formulary guidelines can be accessed via a PDA or laptop while a rep is waiting to see a physician in his or her office. Just-in-time training also can be an effective means of communicating important information before, or in conjunction with, a product launch.

BRENNAN. Even though e-learning has grown in popularity, there is still a strong demand for the continuation of face-to-face training programs. Because of the need to produce ROI, many companies are now turning to blended learning with CD-ROMs, the Internet, e-learning, and online assessments to create a legacy for the skills introduced during the training as well as tracking their effectiveness. These tools, along with online assessments, have become valuable in assisting the training department.

DREVES. Increasing core business performance and competitive advantage necessitates a highly engaged and well-trained organization, giving employees what they need to meet the organization's goals in the most effective and efficient way possible. Organizations that use e-learning can increase employee productivity, share best practices, improve "good employee" retention, quicken time-to-market, and enhance customer satisfaction by giving their employees the information and resources they need, in the right place, at the right time.

WESTRICH. E-learning is best used for quick and efficient transfer of knowledge and information. Today's corporations strive to impart consistent and up-to-date knowledge to employees across the globe. E-learning ensures the dissemination of data regardless of a facility's location. This is particularly valuable in the life-sciences industry as new equipment and technologies emerge on a daily basis, as

DON O'GUIN

> One of our big challenges is how to bring in technology-based training and have it **BLEND WITH THE OTHER TRAINING METHODS** that we use.

regulatory guidelines change, and the regulatory bodies increasingly are focusing on, and inspecting, training records.

HANGES. E-learning technology has made dramatic improvements in just-in-time training with internal and external stakeholders. When we speak of delivering just-in-time training, we are talking about knowledge transfer at the point of need. The applications where we have seen this work most effectively are in salesforce training, SOP training, and protocol amendment training.

GEVEDON. In the CRO industry, associates are our assets and are a big part of our core business in terms of managing the clinical-trial process. Our ability to provide every one of those clinical research associates, who are in the field in support of our core business, the opportunity to access e-learning 24/7 anywhere in the world, is a huge advantage. Because we are Internet based, we are able to deliver information that they need immediately after we receive it from our sponsors.

CONNELL. E-learning solutions provide companies with the ability to increase efficiency by providing consistent, quality, just-in-time, knowledge transfer across the organization. Organizations that disseminate information poorly will eventually lose profits and credibility. Organizations that get this right will have the competitive edge as their employees will have the data they need to make informed decisions.

BRENNAN. The advantage of e-learning is that the participant can go back and review key program concepts or receive additional information to reinforce the learning experience.

SHERRY GEVEDON

> Our synchronous training is delivered via a live collaboration tool and we have a significant number of courses that are asynchronous. **WE HAVE ENJOYED SUCCESS WITH BOTH**.

Using these tools has shown an increase in the retention and application of the skills.

BONTHRONE. E-learning can increase business performance by ensuring that people become more productive through greater knowledge retention, and they do so more quickly, conveniently, and efficiently than with traditional means of instruction. Furthermore, for minimal additional cost, companies also can have easy-to-use refresher tools at their fingertips. This helps ensure that employee productivity is optimized over time.

MANDELL. From the perspective of a brand team trying to meet a marketing or an educational objective, e-learning can be very economical. For the company that does live meetings and various types of Internet programs, the experience for the participating physician in the e-learning environment is much richer and much more fulfilling and obviously more beneficial to the brand team in terms of delivering an adequate message.

MILHEIM. The use of synchronous Web-enabled tools to communicate, not just in training sessions, but in meetings where people can share documents, is increasing.

BREEN. Reduced overall cost is the single most influential factor in adopting e-learning. The elimination of costs associated with instructors' salaries, meeting room rentals, and travel, lodging, and meals are directly quantifiable.

e-**BEST PRACTICES**

CONNELL. Organizations should have a holistic approach to knowledge transfer. One component of that is providing e-learning experiences where they are most applicable and cost-effective. Internal processes need to be built to support the e-learning infrastructure with a strong commitment on the part of the organization to provide the appropriate resources.

DR. STEVEN JUST

BREEN. E-learning should begin with a plan — who, what, when, where, how, and how much. Second, there

> The current term is **BLENDED LEARNING.** There are advantages and disadvantages to instructor-led training, print training, e-learning, and traditional media. Each has to be used properly in the proper situation.

needs to be involvement from the stakeholders, or other representatives, until they take ownership. Third, the process and strategies associated with the business goals must be analyzed. Fourth, organizations need to purchase and or create the content to support goal achievement. Fifth, the e-learning environment — community, content, and collaboration options — needs to be set up. Sixth, a learning program must be developed at the job level that is oriented to the processes and strategies. Seventh, it is important to determine how to manage change and measure results. Eighth, the program must be tested and marketed. Ninth, a roll-out plan should be developed. Tenth, it is critical to get lots of feedback.

GEVEDON. Each adult learner has a variety of ways of learning. Each individual enjoys different styles of teaching that may support his or her level of retention or level of ability to communicate the new knowledge in a business setting. We try to meet the demands of each learning style, whether it be people who enjoy self-paced learning, sitting down in front of a computer and transferring the knowledge by themselves, or whether they enjoy the follow up of a coach or a mentor.

REECE. Best practices in integrating e-learning initiatives with business processes include identifying learning outcomes and the instructional approach up front. All training, including e-learning, should appropriately reflect and support core business goals. Identifying appropriate learning outcomes may require the input of a number of stakeholders.

DREVES. To integrate the e-learning initiatives with business processes and strategies in support of core business goals, there needs to be a focus on all of the efforts to meet the organization's goals. That begins with defining the business need, developing and optimally executing the learning plan, and measuring the plan against the business result.

E-learning as a Tool to Empower the Salesforce

E-LEARNING IS WIDELY RECOGNIZED FOR PROVIDING USERS WITH EASE OF ACCESS, IMPROVED EFFICIENCY, AND REAL-TIME TRAINING MEASUREMENT. BUT ONE OF THE KEY BENEFITS THAT IS OFTEN OVERLOOKED IS ITS ROLE IN BUILDING CONFIDENCE AMONG THE SALESFORCE.

Instilling confidence in the salesforce was a key issue for a leading pharmaceutical company that recently prepared to launch a new antipsychotic treatment in the Japanese market. The company's sales reps faced several major hurdles going into the launch.

FIRST, physicians were largely unfamiliar with the pharmaceutical company as it had only a small market share in Japan at the time. As a result, the salesforce had few established relationships with physicians.

SECOND, the societal view of physicians in Japan created an unnaturally large sense of inequity between the doctors and the reps, making it challenging for a rep to communicate on a peer-to-peer basis or to "push back" when physicians raised objections.

The pharmaceutical company's brand team sought a sales-training solution that would build the confidence of reps by teaching them exactly what to say and what to do in front of physicians and how to effectively overcome opposition. The brand team selected an e-learning Intranet program known as smartED. They recognized that an interactive application would help reps comprehend and retain the material better than traditional training methods alone.

The application divided the training information into four sections or workshops — sales aids, objections, reprints, and competition — and was designed to empower reps to directly and succinctly communicate the benefits of the product to physicians.

The **SALES-AID** workshop showed reps how to walk a physician through the sales aid, highlighting key messages in each section. An audio track gave reps exact words to say to physicians and instructions on how to respond to questions. The **OBJECTIONS** workshop outlined common challenges posed by physicians about using the product and demonstrated strategies for overcoming these objections. This section was particularly important because most reps in Japan had little or

> We have to stop companies from looking at e-learning as a tactic or something to be checked off the marketing plan. **E-LEARNING IS ALIVE**, it has the ability to grow and the ability to adapt.

John Racik

no experience confronting physicians' objections. The **REPRINT** workshop explained the clinical-research articles about the product and gave instructions on how to communicate the key findings to physicians. The **COMPETITIVE** workshop enabled reps to compare indications, dosage, side effects, interactions with other drugs, and precautions of the product versus competing products.

Because the application was accessible via the Web, reps could log on from any Internet connection and complete the workshops at their own pace any time, 24/7, which increased their comfort with learning the material. At the end of each section, reps were required to complete a 20-question quiz and submit their responses electronically.

The quiz scores, which were made available to both the reps and their district manager, provided positive reinforcement to the reps, while also identifying areas that still needed to be mastered.

Mastering the material in the workshops elevated the reps' ability to address physicians as product experts and empowered them to communicate successfully about the product benefits. As a result, the unaided recall of the product among physicians within six months of launch far exceeded the brand team's goal — 48% versus the goal of 30%. The product launch became the most successful for any CNS product in Japan at the time.

Source: Blue Diesel, Columbus, Ohio. For more information, visit bluediesel.com.

PAUL HEALY

LEARNING SHOULD BE GOAL DRIVEN, both from the organization's and the learner's perspective. In a professional context, goals should be business oriented.

CONSTANTINE. The overriding rule with any training is that there needs to be a business partnership. In the past when training initiatives or training departments failed, it was largely because the training departments hadn't been enough of a partner with the other business units. If everyone is part of the process then e-learning will become a best-practice initiative.

HEALY. The best way to align any practice to a goal is to require participation. The Office of the Inspector General points the way in its recently published Compliance Program Guidelines where it recommends that participation in training programs be made a condition of continued employment, and training requirements should be a factor in the annual evaluation of each employee. Professional education exists solely to support a client's business. Clients target P&L. Reaching these targets requires professional capabilities, but individuals vary in the level of knowledge they have to do the job. To succeed, companies need to identify these gaps and provide the education to fill them. This can't be done solely with e-learning. A best practice is to map competency models for job roles to an education curriculum and to create individual learning paths that might be a combination of e-learning, assigned reading, online review sessions, case studies, workshops, video tapes, coaching, and mentoring.

GEVEDON. One of the best practices from an education perspective is for IT and education to collaborate synergistically. When building e-learning, IT will be a primary focus in terms of establishing server and infrastructure capabilities. But with education, content always drives programs, so the integration of both disciplines and processes to support a learning strategy is the best support of a core business.

O'GUIN. Having input from a wide spectrum of stakeholders on an e-learning initiative is important. Many e-learning initiatives are going to touch on different departments, including HR, finance, IT, sales, sales operations, organizational effectiveness, or organizational development. Having all of those stakeholders involved in the vision phase of e-learning is important so that there is ownership and involvement, as well as having the real breadth of the company applying its interests and needs to that e-learning initiative.

e-**INTERACTIVE**

CONSTANTINE. There are primarily design challenges with e-learning, particularly when addressing sales reps. There are many promises and benefits to e-learning but the problem is we tend to take old programs from the classroom and cram them into an e-learning program. The program is served up as if it were an exact replacement for the classroom. What results is a long drawn-out program where people have to sit in front of their computers for a long time to complete. These programs are hard to download because of bandwidth issues. We need to get smarter with the design, making programs shorter, more frequent, interactive, and fun.

JOHNSTON. Creating good content does not mean the same thing as delivering a good solution. Working within the IT and enterprise software constraints of large pharmaceutical companies is extremely difficult and time consuming. Finding partners who have this experience must be one of the main priorities of pharma companies; sometimes they underestimate the importance of this.

CONSTANTINE. The best designs are programs that have an appropriate balance of text and graphics and have an interactive component. A session can have text and graphics, but if it is just a PDF file people are going to be dissatisfied because they could have just read a book. If people are going to go to their computer for learning, a program has got to take advantage of the things that computers can do, such as pop ups, simulations, and drill downs. Those are the things that can be used to mimic what happens in the classroom.

DREVES. Highly interactive training sessions are defined as truly great training sessions, which achieve substantial results. That takes training to the next level and includes strategy, which engages the user's mind, ensuring the participant will be more likely to remember the information, and increasing the transfer of information to job performance.

GEVEDON. A hybrid approach — a combination of self-paced training and live, instructor-led training — is the best way to have highly interactive training sessions. We connect our locations around the world into our live training over the Internet and we network in our associates at each of those locations. We have 18 locations and may have 10 people to 60 people in a conference room at any location. This provides them with a classroom environment, which they enjoy for the networking, the team work, and the case studies. And it provides us with a way to deliver highly interactive training that aids in retention and in the transfer of knowledge.

AHERNE. The only way to create highly interactive training sessions is to put the user first and ensure that effective instructional design methodologies are employed to maximize the benefit to the user. The focus has to be on not only the maximization of the user's attention span, but on facilitating their awareness span. The users have to be aware of where they are in the structure of a course and be able to identify the logical chunks of information.

REECE. The most effective way to create highly interactive training sessions, whether developing synchronous or asynchronous learning programs, is to build in many opportunities to engage the student. Training programs, including e-learning, should appeal to different learning styles, including visual and auditory. The use of a blended approach has become very popular. This type of learning allows trainers to incorporate a variety of learning modalities into their programs to meet the differing needs of their learners.

JODIE KALIKOW

If a company doesn't know who needs to be trained and what the employee's current level of skill is, it **SHOULDN'T THROW A LOT OF ENERGY AND MONEY** into having e-training available. The most successful companies know this information and correlate training programs with business goals, such as ensuring regulatory compliance or increasing sales and channel readiness.

NIALL JOHNSTON

MANDELL. The best way to have a highly interactive session is to have it be live, have it be small, and have it include a fair amount of opportunity for interactivity. We like to incorporate case studies in our programs, and physicians tend to enjoy this. An interesting portion of a CME program is the opportunity to get a CME credit, of course, and to do that there is a testing procedure.

BONTHRONE. The more interactive the environment, the more the student is likely to learn, retain knowledge, and enjoy the experience. The ideal method of doing this is by conducting a synchronous class. Research demonstrates that a live instructor leading a virtual classroom results in greater audience participation and knowledge retention than a static, passive environment in which a student simply reads HTML content, for example, from a monitor. We also strongly believe that having a comoderator with the moderator, teacher, or instructor leads to overall increased knowledge retention because there is no need for the class to stop if one individual has a question. The comoderator can address the question while the rest of the class proceeds uninterrupted.

HEALY. We retain 10% of what we read, 20% of what we hear, 30% of what we see, 50% of what we see and hear, 70% of what we discuss with others, 80% of what we experience, and 95% of what we teach others. Every e-learning

SHAWN MILHEIM

Many of the new training strategies include the use of blended learning — **THINKING OUTSIDE THE BOX** for newer ways to deliver training that will help to ensure that those strategies that are taught are the most effective.

creator should have that mantra tattooed on his or her brain. The computer-game industry has a much better take on this — we can all learn a lot from the Playstation generation.

O'GUIN. Training should approximate the work environment, challenges faced, decisions to be made, and actual customer and employee interactions. Scenarios and simulations are key to interesting online learning that produces level-three results.

KALIKOW. Giving people different ways to learn is one of the best ways to create a highly interactive session. For example, companies often provide interactive videos and Web-based training as a starter so that people have a basic familiarity about a course topic before they come to a class.

CLOPPER. One way to have a highly interactive training session is to build training programs that let the learners decide on the amount of information that they want. Sometimes we think that we have to provide all information to all learners.

RACIK. To really make the learning experience interactive, it has to be fun. The use of 3D animation is being used extremely well to make the science come alive. When the molecular structure of a product is put into 3D animation, participants can see what a product is able to do for a patient by how it works in the body through its mechanism of action. This is not only for sales reps and product managers, but we find that the use of 3D animation for physician training has really taken hold.

JOHNSTON. There are a lot of really cool technologies now to create highly interactive sessions, especially in the 3D modeling space. But the key is not the technology — it is really about partnering with the pharma companies and using their employees, marketing teams, ad agencies, and contractors to develop interactive scenarios that are relevant. Technology can help someone implement great ideas, but its only 50% of the solution.

CONNELL. One way to create a highly interactive session is to provide Q&A sessions through interactive Net meetings. Another is to post a threaded discussion to a chat area.

WESTRICH. Before designing and developing a training session, careful thought must be put into profiling the learner and defining the objectives of the session itself. Once these are completed, the instructional designer of today has a vast number of development tools to create both interactive synchronous and asyn-

Developing **CONTENT THAT IS SCIENTIFICALLY AND MEDICALLY CORRECT AND CORRECTLY REFERENCED AND ACCREDITED IS NOT AN EASY TASK.** Many pharmaceutical companies have learned the hard way by working with content providers who are not self sufficient.

chronous training sessions. Technical issues such as delivery mode — Internet, Intranet, or CD — also will help determine the appropriate tools to employ. It is essential that the development and testing phases are learner-centric, keeping the end user in the mind.

HANGES. The best content should be delivered using a blended approach — integrating a combination of live online and self-paced online training. We like to use live online training for the collaborative exercises and Q&A sessions, and then self-paced online training for more individualized training. For live online training, we make sure the participants are interacting with the presenters every three to four minutes through a variety of methods, including surveys and polling, quizzes and evaluation questions, and break-out rooms for group exercises. For self-paced training, we try to include as many real-life scenarios and case studies as possible. Technology allows us to provide immediate feedback mechanisms to the learners to reinforce points throughout the content. We can even let them know how well they scored against others, how quickly they responded, and so on.

e-RETURN ON INSTRUCTION

MILHEIM. Measuring ROI is usually difficult. What we like to do is measure return on instruction and make sure the participants are learning the material. One can build a case for ROI by showing not only that there is a hard ROI, but that there is support around the softer parts of ROI, such as increased morale, a decrease in sick days, and so on. It doesn't

always make sense to perform a ROI analysis for every training project.

GEVEDON. The best way to measure ROI in terms of e-learning is to tie it into performance. There needs to be a baseline of skills before a program and then an analysis after a program; companies then need to implement a skills-gap analysis to support the findings. This is the best strategy for measuring ROI.

RACIK. Everybody is looking at ROI. But it's important that companies evaluate ROI in the right way. They shouldn't look at e-learning solely in terms of profitability and turnover ratio. Companies need to evaluate e-learning more holistically and recognize that through the use of technology they can have a more well-rounded or better-trained representative and, in turn, a more satisfied customer.

Lisa Hanges

Clinical Lessons to be Learned

PHARMACEUTICAL COMPANIES SPEND ALMOST $7 BILLION HOSTING AND TRAVELING TO IN-PERSON MEETINGS EACH YEAR. More than 10% of this expenditure, or $700 million, is spent annually training investigators and coordinators how to conduct specific clinical trials via traditional face-to-face investigators' meetings. This important training is normally delivered with no verification of knowledge transfer or protocol comprehension (other than a sign-in sheet).

A desire to obtain better trained study teams, coupled with the fact that the cost of clinical trials is on the rise and budget and travel restrictions are being tightened, is driving sponsors to seek innovative methods for delivering more effective and affordable investigator-protocol training. To offset these challenges, pharmaceutical sponsors are treating their investigators' meetings as "protocol training sessions" using online technologies to realize significant improvements in protocol/procedure comprehension, quality, learning retention rates, and enhanced site performance.

COST EFFICIENCY

Pharma companies budget about $200,000 for a 100-participant investigators' meeting. The true costs can quickly escalate to $300,000 or more when additional training, CRA visits, and project-management time required to train the 20% to 25% of participants who do not attend the initial investigators' meeting are taken into consideration. This an expensive proposition compared with online solutions, which command a $50,000 investment to deliver the same content, to a broader audience, with no travel requirements, and no additional training. Plus, there is an ability to measure participation, completion, and comprehension and archive the session for future use. Incorporating online investigators' meetings on an enterprise scale (i.e., 50 meetings) can yield more than $10 million in cost savings per year.

Online meetings delivered through Web-conferencing technology can produce more engaging sessions for the participants and more meaningful results for pharmaceutical sponsors. The two-way communication and collaboration features of Web-conferencing capture important information from online participants throughout the session. Sponsors, at a minimum, can verify who attended, who participated, who understood the information (and who didn't), what challenges the sites may face, and even predict which sites will reach enrollment goals and which sites are unlikely to do so.

> We have seen the use of **E-LEARNING TECHNOLOGY MAKE DRAMATIC IMPROVEMENTS** in just-in-time training with internal and external stakeholders.

SITE PERFORMANCE

A recent study published by Eli Lilly comparing virtual protocol/site training with face-to-face protocol/site training over four compounds and nine clinical-development programs suggests that the virtually trained sites had significantly fewer data query rates per case report form page than those trained at the in-person meeting. Other facets of site performance can be improved as well. Consider lowering screen failure rates by improving investigators' and coordinators' knowledge of the inclusion/exclusion criteria of the protocol. A recent survey found that more than 70% of investigators would rather conduct sessions online than travel to a face-to-face meeting. Additionally, learning retention rates are increased by as much as 60% using online training solutions.

THE FUTURE OF ONLINE TRAINING

Early adoption of online solutions has shown immediate ROI and dramatic improvements over traditional practices. Online training solutions also can be used to reach physicians close to study centers, to facilitate referrals, and to educate patients about study expectations and the informed-consent process. Sponsors now are deploying online sessions to accelerate time to first patient enrolled, oftentimes bypassing initiation visits. Investigators and coordinators can prepare for a clinical trial by taking self-paced, study-specific training modules months in advance of the study launch. After completing the protocol and procedure competency/testing modules and obtaining IRB approval, sites can attend live, online Web-conferences with the study team. Immediately thereafter, clinical supplies can be shipped and patients enrolled.

Source: ePharmaLearning, Conshohocken, Pa. For more information, visit epharmalearning.com.

STEVE MANDELL

E-learning allows pharma companies to **REACH KEY PHYSICIANS WITH EDUCATIONAL MESSAGES** that in the past they couldn't do from a logistical barrier.

REECE. Measuring ROI in any training program can prove to be a daunting task and e-learning programs are no exception. The use of assessment tools is one way to measure ROI, and this can take place post-training to measure change in knowledge or behaviors. Assessment also can measure the level of retention of participants, as well as to extend the transfer of training to its application on the job. Other indicators include improvements in overall job performance measurements and self-assessment whereby participants rate themselves on the perceived benefits of training programs and the application of knowledge gained to their job.

CHARLES BRENNAN

WESTRICH. Measuring ROI from e-learning typically includes examining key indicators such as past training costs, increased productivity, improved quality, reduced waste, reduced staff turnover, and reduction in lost-time injuries. Out-of-specification reports, QA reviews, and regulatory inspection reports also

Because of the need to produce ROI, many companies are turning to **BLENDED LEARNING** with CD-ROMs, the Internet, e-learning, and online assessments to create legacy for the skills introduced, as well as tracking their effectiveness.

help determine real ROI. Today's enterprise LMSs/LCMSs are valuable tools to evaluate the effectiveness of different training methods. Using pre- and post-assessments, corporations now can easily evaluate a participant's retention regardless of the facility's location.

BREEN. A company must tie the learning objectives to the business goals by building content that meets requirements for learning, impart information, develop understanding and insight, and/or build skills and competencies. It is important to determine the desired outcomes and decide on how to observe and measure these. A company assesses learners regularly using a variety of assessment approaches — by getting regular feedback from learners, their managers, and peers.

JUST. Many pharmaceutical companies are providing the knowledge transfer part of the training process via e-learning. For example, before reps come in for training, pharma companies will mail out CD-ROMs. In the actual classroom reps can focus more on application — how to use the information learned from the CD-ROMs to sell.

DREVES. Measuring ROI in terms of organizational change is where most traditional learning organizations do not meet expectations. All learning programs should answer two questions: how will learning be applied to on-the-job performance, and what business changes are expected as a result of the learning programs? Many trainers believe that their training responsibilities end after a student leaves the classroom or when a technology-based training program is successfully delivered.

BONTHRONE. One of e-learning's greatest advantages compared with traditional means of instruction is that it presents an excellent environment for ROI to be measured and reported much more easily. Over time, the effect on organizational change can be measured by conducting simple post-training analysis and linking these back to core performance metrics such as increased sales, greater market share, and so on. Retention levels can be measured through real-time assessment and reporting tools. The effectiveness of e-learning also can be measured by first evaluating the types of questions that sales reps are posing to a call center and then custom-tailoring training to address those particular issues. After the training is completed, subsequent call-center volume can be measured, and the ROI can be determined as to whether the initiative led to fewer questions and ultimately greater productivity.

AHERNE. Some organizations contend that it is impossible to fully measure the results of learning. But, there are methods available that claim to do this, such as the Kirkpatrick levels of evaluation — which identifies four levels to assess when evaluating training, including reaction, learning, behavior, and results. Changes in behavior can be monitored in the workplace best by using supervisor feedback. The Thomson Job Impact study found that e-learning produced almost 100% improvement in accuracy of performance on the job and 159% improvement in accuracy through blended learning.

DAVID BONTHRONE
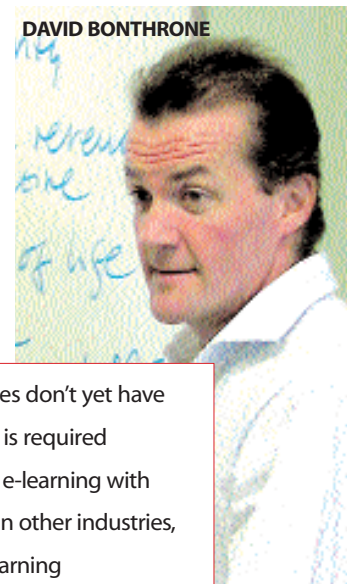
Most pharma companies don't yet have an assessment of what is required technically to integrate e-learning with their learning strategy. In other industries, companies are using learning management systems to measure the impact of asynchronous content and are moving on to the next stage of e-learning — **VIRTUAL CLASSROOM TECHNOLOGY.**

O'GUIN. It can be difficult to measure ROI, especially for online soft skills, such as training around coaching, presentation skills, and decision making. But developing metrics for e-learning is a must. It is easy to measure level one — did the participants like the training? It is easy to measure level two — do participants claim to have learned anything? But measuring level three — did participants' behavior change and did it change on a sustained basis? That is where the real challenge comes in. And that's what we are looking for at Pfizer. It is great to teach people something new. And it is great that they say they learned something new. But on the job, did they apply the information, are tasks being performed differently, better, faster, or cheaper than before the training? These are challenging questions to answer and difficult results to measure at times.◆

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