

Collaborative To Learning Contin

I recently guest-lectured on trends in workplace learning for a group of students studying for higher degrees in human resources. The students were working adults who enrolled in an evening program. I started my talk by asking the students to tell me about a recent learning experience and what they liked or did not like about it. I had intended this exercise to be an enthusiastic transition into the boundless possibilities offered by technology-based learning. Instead, it became a litany of complaints.



ols in the uum

Margaret Driscoll, Ph.D.

The complaints could be placed into three categories: the lone-learner experience, the hard-coded correct answer and the lack of meaningful learning. A number of students talked about the isolation of sitting hours for what they described as page after page of reading or listening to a narrator drone on. Even the live virtual classroom was criticized as being “about as participatory as watching television.” It should be noted that lone learners also experience technical frustration. There was massive resentment toward e-learning programs employing multiple-choice answers. Students felt that answers were often unfair because there were alternative correct answers that were not acknowledged. In some cases, not getting

the “right” answer meant that learners had to retake sections of the program. Finally, they complained that the learning experiences were not meaningful. The programs were too general to address their concerns or too high-level to provide a valuable experience.

My opening exercise did not do what I intended, but it did make a good segue into my talk. One of the trends in workplace learning is collaborative learning, both informal and formal. The proliferation of technology to help people communicate and work together has made informal learning red-hot. We have probably all engaged in informal learning. Consider these scenarios: While on a customer conference call, an unexpected question comes up about making a video, and an employee sends an instant message to a peer asking for an explanation of how to estimate costs for developing a 60-minute video program. A team preparing a presentation for a pharmaceutical company invites an expert in pharmaceutical marketing to an e-meeting to review their presentation. A sales rep is having trouble using a forecasting application and her forecast is due in an hour, but using application sharing, a teammate shows her how to adjust the probability of close and the dollar value of her leads.

“Internet technology has put informal learning on steroids. Embedding learning into work will have a dramatic impact on performance and innovation in an on-demand world,” said Nancy DeViney, general manager of IBM Learning Solutions. “Making learning available to learners when they need it and allowing them to learn in a more collaborative way on a day-to-day basis will enable new ideas, better decisions and innovative solutions that drive business value.”

Formal collaborative learning has not fared so well in the e-learning era. It has not been able to compete with the lure of learners working alone at their own pace, the single-minded pursuit of measurable performance and the enticing promise of getting large returns on investment by reducing the time spent learning. What is most striking about the lack of formal collaborative learning is the fact that training organizations that deploy e-learning are awash in collaborative tools. Today’s training departments are well equipped with at least two of these technologies: live virtual classrooms, instant messaging, threaded discussions, chat,



CHIEF LEARNING OFFICER E-SEMINAR

November 3, 2004

Collaborative Tools in the Learning Continuum

Solving problems in today's complex business world often requires collaborative approaches, bringing together expert resources that may be across the hall, across the country or across the ocean, all in order to address a common challenge. But how do you build a collaborative spirit and help your teams make the connections that count? This e-seminar will show how informal and embedded learning are making education more meaningful and valuable.

To register for this FREE event, powered by Interwise, go to www.clomedia.com/eseminars.

in practice:

Nektar Therapeutics: Collaborating in Compliance

Brian Summerfield

Nektar Therapeutics, based in San Carlos, Calif., provides drug-delivery technologies to enable the development of a wide variety of high-value therapeutics. The company's drug-delivery capabilities are designed to help its biotechnology and pharmaceutical partners meet drug development challenges and realize the full potential of their therapeutics. Nektar has partnered with more than 20 major biotechnology and pharmaceutical companies, such as Pfizer, Roche and Amgen. Some of the products using Nektar technology include Roche's PEGASYS, used to treat hepatitis C; Amgen's Neulasta, designed to alleviate neutropenia (low white blood cell count) following chemotherapy treatments; and Pfizer's Exubera, an inhaleable insulin for type 1 and type 2 diabetic patients.

Because the biomedical field is so heavily regulated, one of Nektar's greatest challenges is keeping up with industry and government standards, which are often complex and frequently altered. To keep up, not only are company employees in training continually, but also the learning programs that they use are continually updated. "The content is modified nightly, so it is very accurate and very relevant," said Heidi Rebottaro, project manager of application development at Nektar. "These training (programs) are revised on a monthly basis. The average person at Nektar has an average of 15 to 20 training classes that they are required to take every year. Imagine 900 people with 15-plus training classes each. It's a nightmare just to manage how compliant we are."

"Typically, training is classroom-setting," she said. "If it's a change to an existing application, CBT (computer-based training) would be the way we'd go. If it's a new technology, it's one-on-one training or seminar-type training followed by one-on-one help. We have various different ways of handling that."

Until recently, Nektar had problems of efficiency with standardization and delivery of training programs, Rebottaro said. "We had a training department with about five people who would enter training requirements into a system. Reports would then be manually printed and given to the managers. Then it was left up to the managers to make sure that their staff was adequately trained in time. They were overwhelmed."

However, the company modernized its system early last year, which streamlined the process to an enormous extent. "We took that system and put an interface on it, which we built into our portal," Rebottaro said. "We personalized our portal using IBM WebSphere technology. An end user can log into the system, which we call Galileo. It knows who they are, it brings up all the information that is relevant to that employee, and the person can start working." She added that by logging on to the training page, individuals see their training history and delinquencies, and can use links to access information and sign-up functions for classes they lack. In addition, users can connect with the training department through e-mail or live chat to ask questions or make requests.

"It's a very comprehensive, wonderful application," said Rebottaro, and added that course enrollment was boosted immediately after classes were added to Galileo. "The compliance to the training is more efficient. That tells me that people are using the tool, they are interested in staying compliant, and they are interested in getting trained."

Rebottaro offered hard numbers that demonstrated the tool's effectiveness. "Prior to Galileo, people would check for the delinquencies manually. If they had a new training class, it would typically take about two-and-half months for people to become 95 percent compliant with that training. After Galileo rolled out, it took half a week to get the same amount of people compliant. That is because they knew of the requirement. In the training page, it shows percentage of compliance."

Galileo also shows management the level of compliance employees have attained, making the flow of information through the organization much quicker. "Reports are automatically generated instantly to management, not only to the first-level manager, but all the way up to the CEO," Rebottaro said. "The latest (new feature) was dynamic reporting, where the CEO at any time can look up who is compliant and who's not."

Rebottaro said that Galileo also has improved employee learning indirectly, by freeing up the training department to develop more content faster. Now, instead of having five people manage compliance and support issues, it only takes one. "I can see that there's less frustration," she said of the training department. "They're more effective. We've had zero questions about how to use it because it is so user-friendly."

application sharing, e-mail, e-meetings, mobile devices or virtual workspaces. Given this embarrassing wealth of tools, the deficit of formal collaborative learning must owe to a lack of understanding of the value of this instructional strategy or a lack of good examples.

Educational Value of Formal Collaboration

Collaborative learning is an instructional strategy in which students work in groups toward a common goal. In the collaborative learning process, each member contributes, with the intent of improving the learning accomplishments of others. As a result of this process, the group's collective learning is greater than the sum of the parts. While not every topic is suited for collaborative learning, it is worth considering collaboration as an instructional strategy when teaching higher-order skills such as synthesis, analysis and evaluation. For example, collaborative learning is well suited for teaching supervisory skills to first-line managers. Collaborative learning encourages team members to verbally justify or discuss how they are solving problems, forcing them to articulate implicit information and knowledge.

Studies have shown that collaborative learning environments are more effective than competitive or individualistic learning environments. Researchers have suggested some reasons for this:

- The learner who learns best is the one who organizes, summarizes, elaborates, explains and defends his or her ideas in the process of collaborating.
- More learning occurs in an environment of peer support and encouragement because learners eagerly work harder and longer.
- Learners benefit from working with more skilled peers.
- Less-able learners are not left as passive listeners, but participate in joint problem-solving strategies.

There is no mandate to use technology to deliver collaborative learning, nor is technology required to have a collaborative workplace. But in recent years, some experts have observed that collaborative working tends to be synonymous with using technology. In collaborative learning, this is not true. In fact, collaborative learning has been missing in action. One of the reasons for this may simply be a lack of good examples.

Take Back the Live Virtual Classroom

In many organizations, the live virtual classroom has become synonymous with a PowerPoint presentation. These programs are one-way information dumps with passive learners "kind of paying attention." Consider changing the format of the live virtual classroom to exploit collaborative tools such as breakout rooms, shared white boards and two-way audio.

The case study is an underutilized strategy for the live virtual classroom. Case studies are part of an effective collaborative strategy that brings interesting, real-world situations into the virtual classroom. This strategy forces students to collaborate by asking them to work as a team to analyze facts, consider alternative points of view and arrive at a decision. Collaborative case studies are not a silver bullet, but they are effective for teaching decision-making skills.

If you have written a traditional case study, you understand the challenge of writing a case that sticks with the facts and leaves the analysis and conclusion to the learners. Learners



will need to read the case before class if you want to maximize the collaborative time. During the live virtual class, focus on discussions and casework. Draft a series of questions that guide the learners and highlight the key issues. Don't underestimate the skills needed by the facilitator. He or she must be able to navigate the virtual classroom with ease and focus on facilitating the case study.

If you don't have a live virtual classroom, don't despair. This strategy also works with e-meeting or Web conferencing software. The collaboration tools you want to have are a shared whiteboard, real-time audio and Web surfing to visit sites that have annual reports, X-rays and online databases. If you need to use a shared spreadsheet, then application-sharing is essential. (See Figure 1 on page 56.)

Consider E-Coaching

If you have purchased a catalog of e-learning courses and the conceptual points and various management topics have been mastered, it may be time for coaching. This collaborative strategy is directive, personal and, in some cases, "in your face." E-coaches can aggressively work with learners to hone key skills in a one-on-one virtual environment.

E-coaching is training delivered via the Internet that helps employees improve their performance and build work-related skills. The coach and the learner collaborate to define the goals, the means for achieving them and the measures for their attainment.

E-coaching benefits learners who want to learn from a coach who would otherwise be unavailable due to distance or scheduling. Using e-mail, instant messaging and telephone, a skilled expert can be made available to a learner halfway around the world. Coaches and learners who are in the same location can also benefit from flexible collaboration technology.

Finding coaches and making good matches is far more difficult than it sounds. An essential part of developing these collaborative programs is to be clear and to set expectations about what kind of skills can be built, regardless of distance. The best e-coaching programs take a blended approach, enabling the coach and the learner to complement the e-coaching with face-to-face sessions. There is no substitute for a coach watching a learner deliver a presenta-

TECHNOLOGY continued on page 56



REDUCE THE OOPS

©2004 Bisk Education, Inc. All Rights Reserved. 46492953

AVOID EVERYDAY ERRORS WITH SIX SIGMA TRAINING

There's always going to be a day when nothing seems to go right. With a Six Sigma Certificate from Villanova University Online, employees gain the necessary skills to measure, analyze and improve any process – helping to prevent little mishaps, while increasing bottom-line results.

- Online availability 24/7
- Green Belt and Black Belt Certificates
- Improves productivity and develops critical skills for leadership
- Prepares employees to achieve the American Society for Quality (ASQ) industry certification

Join the many companies that discovered the most comprehensive online Six Sigma Certificate program on the market. To find out how you can not only reduce the oops, but also the uh-ohs, the oh-nos and any other surprises thrown your company's way, call or log on today.

VillanovaU.com/clo
800-404-7578
Classes Start Monthly

Corporate programs available.

Made Available By

UNIVERSITYALLIANCE

The Nation's Leading Universities Online

A BISK EDUCATION NETWORK

tion, make a sales pitch, respond to questions and maintain composure when interacting with customers.

The technologies used to deliver e-coaching programs are basic. These programs rely on making use of e-mail to collaborate at the participants' convenience. If the coach and the learner both have access to instant messaging (IM), this offers unique opportunities to collaborate and ask questions in real time. Telephones offer a comfortable and reliable technology that can be used in combination with e-mail. This means that the coach can receive and review a draft proposal an hour before it is due and suggest changes to the learner by phone. (See Figure 2.)

Figure 1: Collaborative Case Studies

Strategy	Collaborative case studies dissect real-world problems, challenging learners to work together to analyze facts, evaluate alternatives and reach decisions.
Situation	Use this educational strategy to develop decision-making skills that must be derived from skillful analysis, choice and persuasion. For example, use case studies to teach management skills, medical diagnosis or leadership.
Pros	<ul style="list-style-type: none"> • Engages learners with authentic problems. • Sharpens problem-solving skills. • Improves learners' ability to think and reason rigorously.
Cons	<ul style="list-style-type: none"> • Takes time and skill to write a case study. • The facilitator needs skills in virtual classroom management and case study facilitation. • Not applicable for every subject.
Collaborative Technology	Live virtual classroom, e-meeting or Web conferencing software with the following tools: <ul style="list-style-type: none"> • Application sharing. • Real-time audio. • Web surfing. • White boards.

Figure 2: E-Coaching

Strategy	E-coaching provides a learner with a personalized learning experience that is developed by collaborating with someone who can build his or her workplace skills.
Situation	Use this educational strategy to develop specific skills and to reach learners who will benefit from one-on-one personalized attention. For example, use e-coaching to improve writing skills, to sharpen decision-making and to build powers of analysis.
Pros	<ul style="list-style-type: none"> • Makes scarce or distant resources more available. • Fits well into busy schedules. • Provides personalized and focused learning.
Cons	<ul style="list-style-type: none"> • Match-making can be difficult. • Skills and competencies are limited to those that can be developed at a distance. • Should not be used as a stand-alone strategy.
Technology	Best as part of a blended solution, including: <ul style="list-style-type: none"> • E-mail. • Instant messaging. • Telephone.

Figure 3: Collaborative Games

Strategy	Collaborative e-learning games provide an engaging way for learners to construct knowledge while working together to reach a goal within the constraints of the rules.
Situation	Use this educational strategy to engage learners and sustain interest and effort. For example, use games to teach problem-solving, practicing applying concepts and reflecting on outcomes.
Pros	<ul style="list-style-type: none"> • Games require learners to be actively involved in a process of discovery. • Games reinforce information. • Learning via games is a social and participatory process.
Cons	<ul style="list-style-type: none"> • Games can be costly and difficult to develop. • Transfer of learning can be challenging. • Collaborative games take time and a group to play.
Technology	Web-based games (custom software) blended with: <ul style="list-style-type: none"> • Threaded discussion. • E-mail.

Give Games a Try

Collaborative games involve simulation or role-playing among the participants, who learn through interaction with each other within the game's rules. Collaborative games enable a group of learners to work together to solve a problem, such as finding the right mix of health-care services (the Health Care Game), to apply a concept like supply-chain management (MIT Beer Game) or to reflect on the outcome of international negotiations (SSHRC's e-Negotiation Tournament).

Collaborative games can be costly and time-consuming to design. The challenges are twofold: to design a game that will enable skills transfer for application in real life, and to design an educational feedback and scoring mechanism. With the exception of games based on familiar concepts, most games require participants to learn the rules. Playing collaborative games takes time, but they teach high-order thinking skills.

The collaborative technology required for these games is a blend of custom software and communication tools. Games such as the Health Care Game are supplemented with a threaded discussion and e-mail. (See Figure 3.)

Conclusion

Formal collaboration has been missing in action for some good reasons: It is not as fast as a page-turner, it is less direct than a lecture, and it is more difficult to measure than drill and practice exercises. On the other hand, collaboration is a highly effective educational strategy for developing higher-order thinking skills. Collaboration can overcome many of the common complaints about the boredom, loneliness and irrelevance of e-learning because collaboration-based learning promises to turn passive participants into active learners.

Training organizations have at their disposal an abundance of collaborative tools, but few good examples of collaborative learning. The three collaborative strategies examined in this article differ vastly in approach and process, but they share a belief that learners benefit from active engagement with others. This means that the learners—not the instructor—do the conceptualizing, the organizing and the theorizing about the subject matter. In other words, the learners do the work of learning.

Collaboration is not a silver bullet. It must be used judiciously to teach appropriate topics. In some cases, collaborative learning should be part of a blended learning solution. In other cases, it might be the lead strategy. If your organization has not designed a program using a collaborative learning strategy, consider piloting a program and experiencing the power of collaboration. ■

Margaret Driscoll, Ph.D., is a member of IBM Business Consulting Services in the human capital management practice. She is the author of "Web-Based Training" from Jossey-Bass and a featured speaker at national and international training events. For more information, e-mail Margaret at mdriscoll@clomedia.com.

Copyright of Chief Learning Officer is the property of MediaTec Publishing, Inc. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.