THIS WEEK — MANAGEMENT STRATEGIES

Mission-Critical e-Learning at a National Retailer: A Case Study

BY BRENDA BOSS

Feel like going on a wild ride? Sign yourself up to develop over 150 hours of online learning, deploy a prescriptive Learning Management System (LMS), and roll the platform and courses out to thousands of users at hundreds of locations. "No problem," you say. "Within six months," the client says. Oh. Suddenly you anticipate all the thrills of an amusement park ride — the excitement, the fear, the heart-stopping action, the highs and lows, hanging on for dear life, and then finally wanting to do it all over again.

BI, a business improvement agency in Minneapolis, signed up for this ride in the fall of 2001, and, to be a bit dramatic, lived to tell about it. The client, that we'll call Stan's Store, is an extremely well known retail brand in the United States, but they do not wish to be identified. Perhaps more remarkable is that the end result is on par with the client's business goals, with favorable learner results and return-on-learning-objectives realized. "So," you might logically ask, "why so much in so little time? How did it get done? Did it work?"

The business need

Stan's Stores decided to make some sweeping changes. The highly competitive retail marketplace demanded a re-tooling of store operations. Stan's Stores responded by undertaking a productivity initiative that would transform many operational functions. They wanted to infuse and better use technology to aid productivity. They particularly wanted to decrease the time required to train sales associates. The return on the project investment would increase if the associates became competent in their job duties faster and so began selling on their

e-Learning professionals know their work is mission critical — but sometimes the connection to the business drivers can be fuzzy. This case study showcases how an e-Learning initiative played a pivotal role in a major organizational overhaul. Not many projects are as large as this one, but the processes and thinking applied here may be of tremendous benefit to your organization.

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ed to serve the industry as a catalyst for inno-
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As in any profession, there are many differ-
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techniques and tools one can employ to accom-
plish a specific objective. This **Journal** will share
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for accomplishing a goal. We assume that
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own more quickly. Consumer expectations
and preferences were evolving and Stan's
Stores wanted to improve the customer
experience. Like just about everyone else,
Stan's Stores needed to do more with
less.

The solution

A key strategy for improving productivity
and reducing operating costs was to move
from traditional classroom and print-based
training to a full-featured e-Learning plat-
form. For this initiative, Stan's Stores pri-
mary objectives were:
• Reduce costs of in-store training of
100,000+ field associates
• Improve both the learning experience
and knowledge retention among this highly
diverse audience of field associates
• Increase customer satisfaction by
improving associate knowledge and skills
• Improve training consistency and
reduce the time required to bring new
associates to desired sales performance
• Increase retention of high performers
and the return of trained seasonal employees

Table 1 and Sidebar 1 below, "A sam-
pling" provide a snapshot of the project
size.

BI's role as the vendor was to:
• Partner with Stan's Stores curriculum
team to define standards, curriculum, busi-
ness rules, and implementation details
• Review, classify and catalog all raw
material in mixed media (print, web, CD,
video, audio)
• Design, write, and develop 150 seat-
time hours of interactive online learning,
including associated job aids and testing
("seat-time" is the average time a learner
will spend taking the online course)
• Deploy and host the learning manage-
ment platform, delivering e-Learning
courseware to learners and reporting data
for managers

Sink or swim

There are many e-Learning projects, but
there are few truly mission-critical e-Learn-
ing projects. This project was not just
about rolling out a big chunk of e-Learning
— it was also about changing how stores

TABLE 1 *Fast facts on the Stan's Stores project**

Volume	Activity
• 173,000 active learners	• More than 2,000,000 courses have been fully completed by associates
• 500 courses	• About 71,000 lessons are completed every day, on average
• 1,400 lessons	
• 2,200 test questions	• 408 course titles have been accessed
• 3,800 distinct job functions	• 94,000 learners have accessed the orientation course

* as of March 2003

SIDEBAR 1 *A sampling*

What's in 150 hours of custom-developed eLearning? Here are some sample topics. All
courseware was authored by using industry standard tools, such as those available through
Macromedia and Adobe Systems.

Store-side soft-skill, management, and procedure topics, such as:	*About 90 product lines, in areas such as:*
Cashiering	Tools
Coaching	Major appliances
Credit products	Home electronics
Customer service	Automotive systems
Handling hazardous materials	Cameras
Human resources	Computers and home office equipment
Revenue and expenses	Cooking
Management	Dishwashers
Merchandising	Fitness and recreation
New hire orientation	Home security systems
Stocking procedures	Laundry
	Lawn and garden

operated. This was serious business. Stan's Stores had "go live" dates to switch over to the new operational model, which included changes to their organizational and reporting structures, positions and responsibilities, as well as changes to the stores' floor layouts. These changes were to take place all at once. The questions that had to be answered were: How to deliver training that supports all of these changes? How to ensure all stores learned about the changes quickly and consistently? How to do all this cost effectively? Yes, e-Learning was a key strategy, but the project was still about changing store operations, practically overnight. In order to adopt and follow the new operational model, the e-Learning platform and content had to be available and it had to be great. There could be no other option. There would be no redundant training available in other modes. It was either sink or swim.

Rolling out in waves

If you are familiar with cycles in the retail industry, you know that typically there are limited windows of time to deploy big initiatives to the stores. Because of this, the rollout schedule for the teams was established by working backwards on a timeline. It's unwise to make sweeping changes while stores are getting ready for the winter holidays or worse, during the holidays. That established the requirement to have the rollout complete, all stores trained in all areas, no later than August of 2002. We also needed to avoid the U.S. national holiday on the Fourth of July, so that month was counted out for any rollout action. As a result, the rollout was planned in four phases: a pilot of a few stores, and then what were termed "waves" to a few hundred stores at a time, in three waves. Each wave brought another 30,000 to 50,000 learners on-board.

Between each of these waves, we used the time to gather results, ensure system performance was not impacted, and work through any bandwidth issues that surfaced on the Stan's Stores network, the Internet, or the BI web infrastructure that served all of it. By structuring the rollout in waves, risks were contained, as stores could not revert to the previous methods of operation. Once they were live, they were committed, and since the e-Learning was the sole method of training from that point on, it had to be flawless. This wave rollout approach put boundaries around the
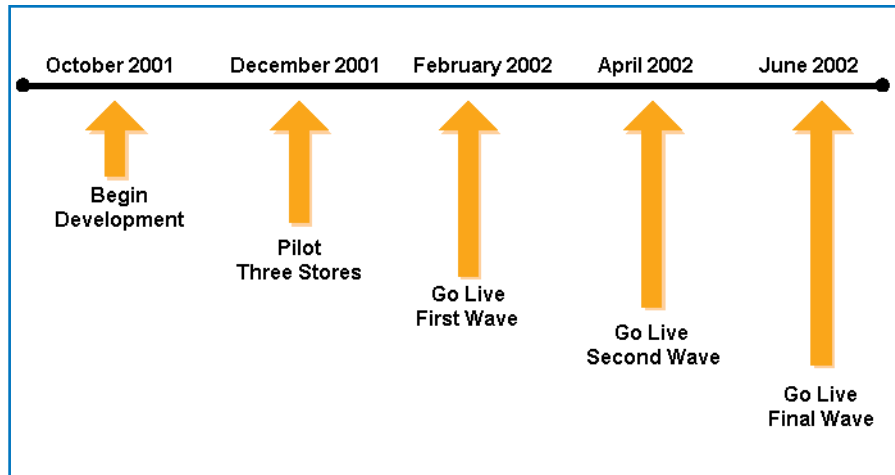

FIGURE 1 *The rollout schedule brought 30,000 to 50,000 learners on board with each wave.*

risk as we incrementally added thousands of users at a time.

To summarize, by working backward, there were incremental rollouts starting with the pilot in December of 2001, then the three "go-live" waves as shown in Figure 1, above. This established a rapid-fire "failure-not-an-option" project schedule. The first deliverable was for the pilot in December, just over 60 days from when the project began in earnest. Relatively speaking, the easy part was getting the learning management system up and running. The more challenging task was getting as much content as possible written, animated, interactive, tested, reviewed, tested again and integrated into the online environment within that same time window — 60 days. We were successful in developing and deploying a significant set of courses for the pilot; additional courses were developed and incrementally deployed over the subsequent four months.

TABLE 2 *Sample elements in the implementation blueprint for Stan's Stores*

1. Program objectives
2. Audience analysis
3. Existing training materials
4. Culture
5. Balance of disciplines
6. Gap analysis
7. Key design elements
8. Learner access and prescription strategies
9. Curriculum plan
10. Implementation plan
11. Technology
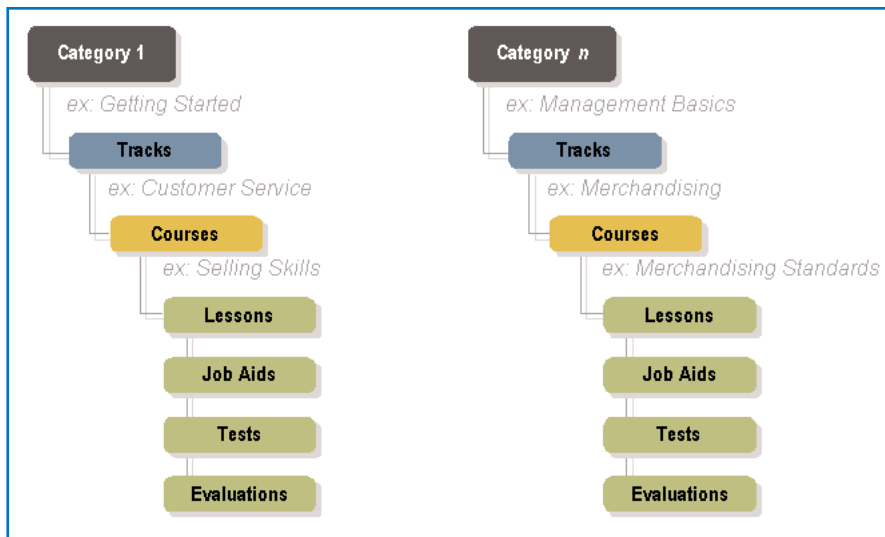12. Risk analysis
13. Communications plan

The blueprint

Actual development work with Stan's Stores started with an assessment of the current situation. The objective was to conduct research and analysis specific to store management needs and then create an e-Learning implementation blueprint that would move the project forward on sound footing. The implementation plan served as a framework for subsequent design decisions, from the content structures to audience dynamics, and instructional design standards to the prescriptive curriculum assignments. Some of the key elements in the implementation blueprint are listed in Table 2 on this page.

A prescriptive, balanced curriculum approach

From the outset, we knew that the e-Learning program had to be prescriptive to the associate's job position. To realize the productivity gains, reduce the time required to bring associates up to sales performance objectives, and to manage the time-in-training cost, it was essential to prescribe just what each associate needed to do the job, no more or less.

The tool that jump-started the curriculum mapping activity was an accountability matrix, the definition of job accountabilities in tiers, developed specifically for this project. Learning objectives and their associated learning objects were mapped to the job functions. A job function was the combination of the business group, the role, and the department. As one might expect, this was a highly fluid design activity with changes, additions, and modifications all along the way. While the LMS automated the mapping once those decisions were

FIGURE 2 *The LMS provides a multi-tiered hierarchy for the curriculum.*

FIGURE 3 *Learners see their customized curriculum in this view.*

SIDEBAR 2 *Reusable learning objects: Size & types for Stan's Stores project*

Because context, continuity, and consistency are essential to cognitive instructional design strategies and learner retention, in this project we defined learning object chunks at the lesson level. Each lesson is a stand-alone learning object and is three to ten minutes in duration. Lessons and learning objectives are assembled dynamically based on learner type definitions. So, for example, a sales skills course has a different composition of lessons for a new hire than the same course has for a manager.

Two other learning object types are prevalent in the LMS: test questions and job aids. When the LMS assembles a course for a new hire, it grabs the lessons for that learner and the test questions that relate to those lessons.

Performance support job aids (such as a PDF checklist on merchandising standards) are also stand-alone objects, referenced contextually within courses and lessons, and are globally available via search tools.

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made, it was nothing short of good old-fashioned instructional design elegance that generated a sound plan. At one point, the curriculum design teams from Stan's Stores and BI used the tried and true "move-the-sticky-note-on-the-flip-charts" method to get thousands of mapping details in plain view.

Across the entire spectrum of store associate performance, whether management duties or product training, the curriculum was designed to incrementally build knowledge, skills, and abilities. While the curriculum and its learner mapping were highly complex, the curriculum was, in the end, simple in structure from a learner's point of view. To support deployment of balanced learning plans and progressive skill-building, as in this case, the LMS organizes curriculum in a multi-tiered hierarchy as shown in Figure 2 at left.

The LMS prescribes a personalized curriculum by assembling the attributes of the learner's job definition, derived from the combination of business unit, job function, and department attributes. After log-in, the LMS displays a catalog of prescribed courses (see Figure 3 at left). In addition to the prescribed curriculum, front-line managers can assign an alternate curriculum to associates who work for them. This option is used for cross-training and succession planning. The LMS is able to do this because we used a learning object approach tailored for Stan's Stores, as explained in Sidebar 2, "Reusable learning objects: Size & types for the Stan's Stores project" at left.

Collaboration

If you are contemplating a wild ride like this one, you'll require the support of a healthy infrastructure, both within your organization and in your supplier's organization too. This is not a matter to be taken for granted. Without strong support and commitment from executive management, the IT departments, human resources, and administration the opportunity for "issues" to develop along the way is increased.

As an example, before the first instructional plan or script was written, both IT departments (ours and Stan's Stores) were coordinating the planning of bandwidth and network traffic management. In no stretch of the imagination did the planning start too early. The collaboration and joint troubleshooting occurred throughout development most actively before and after

each wave. The IT teams' open communication and close collaboration was also needed to define technical standards, security requirements and procedures, disaster recovery procedures, escalation procedures, and help desk procedures.

The development team

Stan's Stores dedicated about 15 project leads and training delivery managers to the project, along with subject-matter experts, legal representatives, and vendor-partners as needed. The BI project team of about 200 people covered the e-Learning design and development competencies required, from instructional designers, graphic artists, and Web designers to administrative support and project management. Figure 4 at right shows how the team from BI was organized for this project.

Tools aid communication and access

These large teams were established immediately and communication was a critical component of productivity. Several tools aided communication flow and real-time access:

• A third-party Internet-based collaboration tool for document and project management. This environment was used to post status reports, design documents, scripts, project plans, schedules, and other project

assets. Automated check-in and check-out procedures were established to maintain document integrity. Automatic e-mail notifications eliminated a manual, tedious, and error-prone process. Project assets were available to all team members no matter their location, at the office, on the road, or from home offices.

• An online review capture tool simplified the process for SMEs in reviewing online content and documenting revision requests or comments. While viewing the online course, the reviewer could type directly onto the Web site to document a question or comment. The tool automatical-

ly captured the information we needed to log and track the SME's comments, and it provided extensive reporting to the development team members. It also saved the SME's time and provided the development team with precise information that they needed in order to move quickly.

• Project team members carried two-way text pagers with them at all times. At first, it was not really known if they'd be helpful. In no time they became a "can't-live-without" device.

To expand a bit on the two-way text pagers, the course development process can exemplify their use. As many develop-
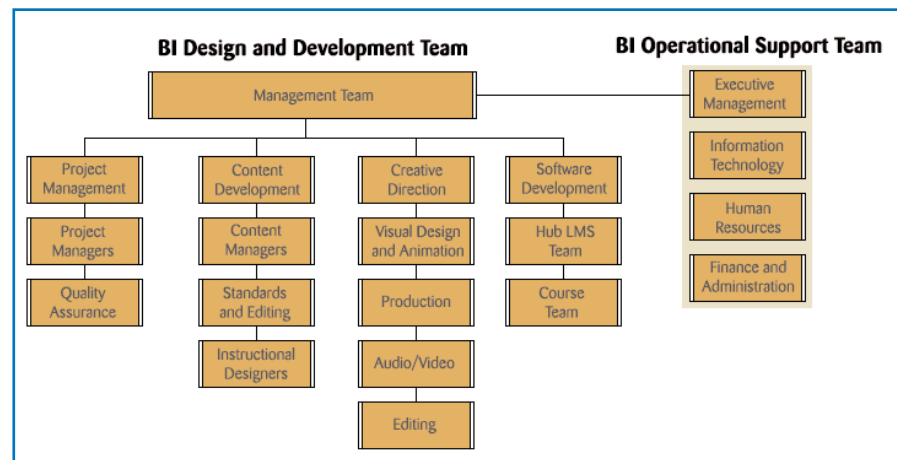

FIGURE 4 *BI's team structure for Stan's Stores provided both design and development and operational support.*

ers know, missing information for a key content item can slow the process down or halt development on a particular piece altogether. When you have hundreds of learning objects in development at one time, slowdowns can jam up the workflow and have a ripple effect downstream that jeopardizes a particular course's go-live schedule. The two-way pagers enabled immediate Q&A on critical decision elements. The pagers also were indispensable because so many of the managing team members were everywhere but at their desks. Quick questions about decisions or upcoming planning tasks (e.g., Question: "Did you hear from Bob yet on the date for the video shoot?" Answer: "Yes, Friday.") were handled immediately and with minimal disruption.
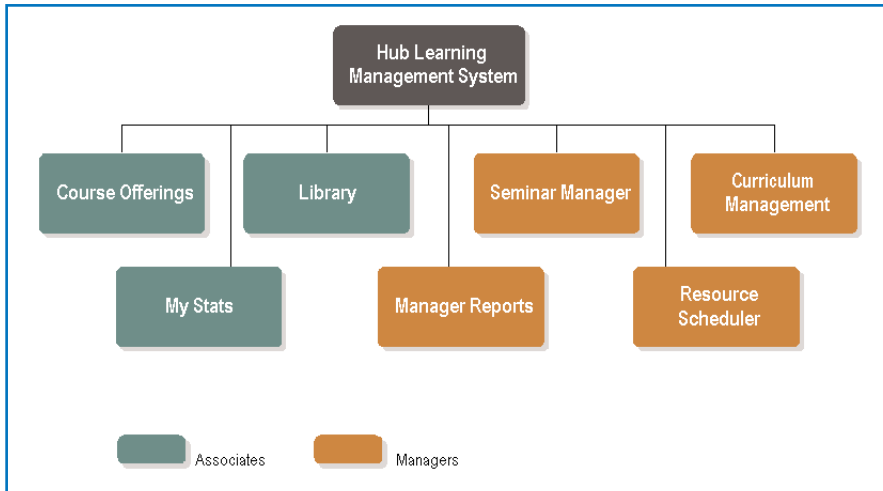
Learning management

The learning management system capabilities leveraged for this initiative initially focused on three must-have functions: reliable delivery of the courseware to the nation-wide network of stores, tracking of learner scores and completion status, and management reporting. After deploying these critical functions the LMS was expanded for enterprise-wide utilization as shown in Figure 5 at left, with capabilities for those business needs added. Highlights of the techniques employed include:

• Learner attributes for building learner profiles and the individual curricula were obtained via a real-time directory services feed.

• While the initial focus was e-Learning delivery for the stores, the management development curriculum for headquarters included other modes of delivery. For that audience, the course offerings also included seminars (classroom instruction), self-study workbooks, and CDs or videos that were ordered from internal or external suppliers. Also for this audience third party courses were integrated.

• At the stores there were more learners than there were PC workstations. As a result, administrators used a LMS resource scheduling module to reserve PCs for learners and to manage learning schedules for new associates.

• Because some of the learners could be novice computer users, a mousing skills course was available at all times from the learner's customized curriculum homepage.

• First time users were required to complete a Quick Tour tutorial that covered the learning management environment and courseware structures.

• During the initial stages of the project, BI handled the learning management administration. After deployment, Stan's Stores training administrators used the self-service tools included in the LMS to perform key functions, such as curriculum mapping for new courses and seminar management.

• Seat-time for each lesson was tracked by the system and was used to help man-

FIGURE 5 *The LMS provided a number of core functions after deployment.*
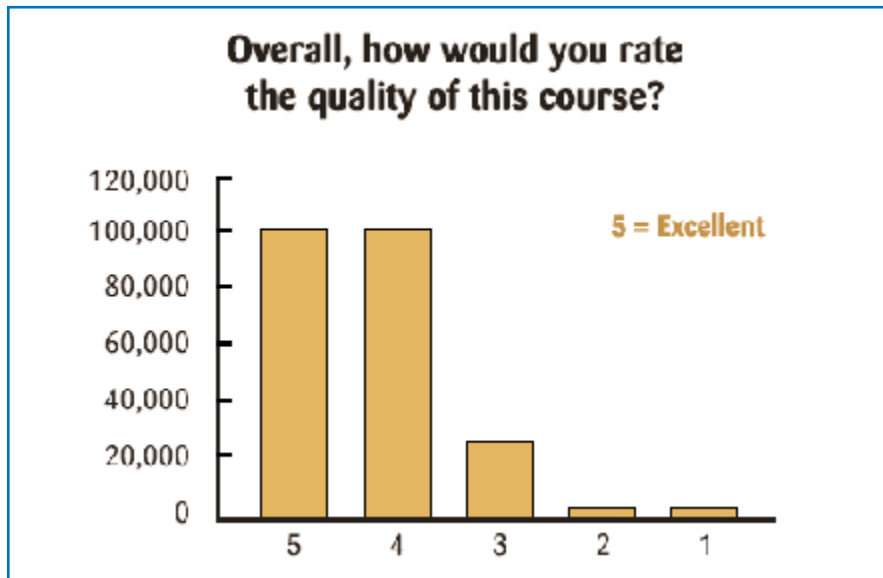

FIGURE 6 *Course quality results from Level 1 evaluation.*

TABLE 3 *Level 1 evaluation items were the same across all courses*

1. Overall, how would you rate the quality of this course? (5=excellent, 1=poor)
2. The course provided me with a sufficient level of information to begin my orientation process and to understand my job role at Stan's Stores. (5=strongly agree, 1=strongly disagree)
3. The test at the end of the course was a fair assessment tool for the information presented as it relates to this lesson. (5=strongly agree, 1=strongly disagree)
4. I found the lessons easy to understand. (5=strongly agree, 1=strongly disagree)
5. The course material was presented in a logical progression that made sense to me. (5=strongly agree, 1=strongly disagree)
6. The test at the end of the course was a fair assessment tool for the information presented. (5=strongly agree, 1=strongly disagree)
7. I would rather take another web-based training course than a traditional instructor-led course. (5=strongly agree, 1=strongly disagree)

agers and learners plan their learning time. In addition, it was used for time-in-training metrics.

• Management reporting was available to all corporate and store managers and was filtered based on role, department, and reporting structure.

Evaluation

Through this case study, we see that big e-Learning initiatives are not only doable, they can deliver on the e-Learning promise. This was a bold move, one that faced every challenge an e-Learning project can face. In the end, the key ingredient for success was good people, as it always is. The teams were committed to the objective and were made up of top-notch professionals. They stayed flexible and agile even under some of the most pressure-cooked deadlines and, over and over again, they did whatever it took to get the job done.

As with any productivity initiative, it was important to have the measures in place to track results. Key measures that the LMS tracks for this implementation are: learner reaction, test scores, number of test attempts, time-in-training, and curriculum completion dates.

Meaningful learner acceptance

We've all heard Level 1 evaluations affectionately referred to as "smile sheets," because they are not a quantitative performance improvement measure. Yet in this case, we find the Level 1 results compelling because they are derived from such a large sample. Additionally, the retail workforce is highly diverse and spans virtually every demographic that you can imagine: young adults, retired adults, high-school students, college graduates, and a broad array of ethnicities. Table 3 on page 6 lists some of the items checked during Level 1 evaluation of all courses in the implementation for Stan's Stores.

Figure 6 on page 6 charts the Level 1 results from more than 200,000 responses to the question "How would you rate the overall quality of this course?" Figure 7 on page 8 summarizes over 200,000 responses to another statement relating to job confidence after completing the course. Even with the diversity of this audience, the reaction is overwhelmingly consistent and favorable.

Since the advent of online learning, enthusiasts and practitioners have been debating the acceptance of e-Learning,

especially questioning whether or not it can be successfully deployed across an audience cross-section such as this. We see these results as affirming that well-designed e-Learning is a viable and accepted mode of learning. We believe the results also affirm that the design objectives and standards for this program were sound. Taking into consideration the timeline and bandwidth constraints that the designers needed to accommodate, this is particularly interesting.

Performance improvement measures

The evaluation and analysis encompasses several metrics, all of which will be factored into ongoing return-on-objective and return-on-investment analyses. Along with Level 1 evaluation, Level 2 knowledge testing is a requirement of every course. Time-in-training is a key analysis metric, as it quantifies the financial savings that the
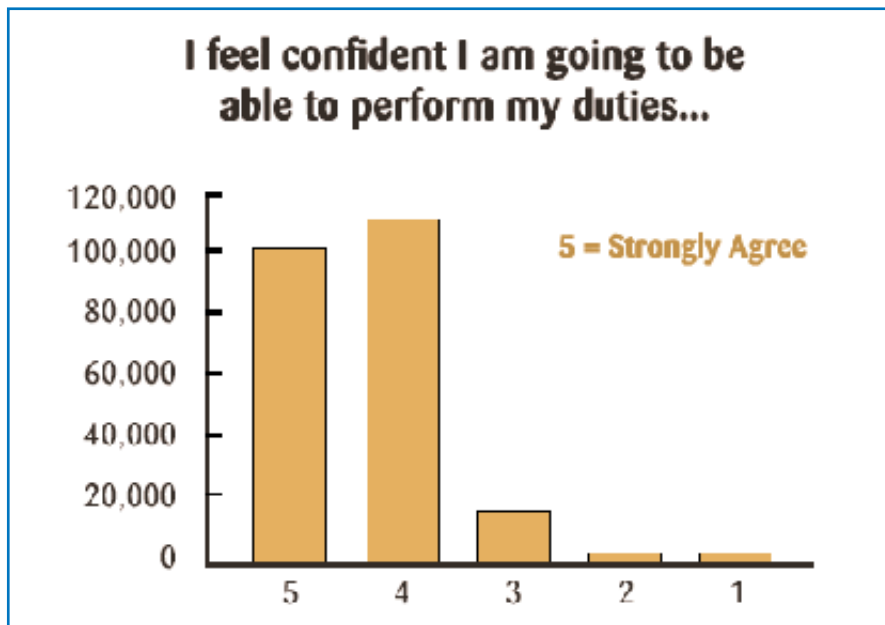
FIGURE 7 *Job confidence results measured on Level 1*

e-Learning solution has delivered. Moving forward, measures will encompass automation of Level 3 evaluation (behavior change confirmation), and Level 4 measures, such as impact on customer satisfaction, individual and group revenue, and additional performance and productivity measures.

Lessons learned

There were many challenges along the way. Organizing this volume of people and activity was a big task, and there were changes in direction and process improvements. Here are five key things that we learned, and that we hope you will find useful.

• Have a good method for managing the digital assets that will be used in the courseware. Most organizations have some existing digital assets that can be leveraged for developing online learning. These might include videos, artwork, photographs, and even product specification sheets. The assets might be used as reference materials for the instructional designers (e.g., a video segment that illustrates customer dialogue), they might be graphic references (e.g., a sketch of the floor plan as a frame of reference for the animation development), or they might be assets that can be used as is (e.g., photographs of the XYZ product). It's essential to have a process and tools for cataloging and referencing the hundreds of assets that are in motion at any one time.

• Shortcuts don't work. There are tried and true steps in the development of e-Learning courses. We tried skipping a step at one point and learned a valuable lesson. For this project, there were some topics for which it appeared the raw material was solid and therefore "convertible" to e-Learning with less effort. That turned out to be a false assumption — those topics required from-scratch development just like all the others. In general, the notion that it is feasible to "convert" one training delivery method into another is rarely true. In another case, for some other topics that seemed "easier," we tried skipping a script review step to move the production along faster. That also did not work and, in fact, created downstream bottlenecks in the workflow.

• Standards pave the way. One of our first activities on the project was to establish and document all the standards for writing and visual design — from editorial standards and trademarks to page layout standards, colors, and interaction must-do's. These standards were essential to fostering consistency and efficiency in the content development process. They were refined along the way and continually served as the bedrock for communicating expectations.

• Hold frequent process training sessions. If you tackle a project of this size, you will likely have people coming and going at various stages, based on which course topics are in progress at a given point in time. Plan to hold training sessions for subject-matter experts and development team members frequently. Even when e-Learning-savvy people join the team midstream, there are bound to be differing perspectives on processes, terminology, and expectations for their roles. (As an example, ask five people about the "storyboarding" process, and you will probably get five different answers.) The training sessions are vehicles to get everyone on the same page on all aspects of the project, from standards, turnaround timeframes, terminology, and follow-through expectations.

• Ensure roles and responsibilities are

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crystal clear. It's all too possible on a project of this size for mistakes and omissions to happen in spite of doing everything right, just because it's not clear who is going to do what and when, or who is communicating what to whom. Make sure you clearly define how the communication chain works. For example, designate one point person to communicate all standards or updates to the standards, even if many other people contribute to that process. As another example, appoint a lead instructional designer as the exchange conduit for content updates or changes on a particular courseware category (such as a product line), and try not to circumvent that communication chain. Getting the right information to the right people at the right time is a basic process step for all projects, and is exacerbated in a project of this magnitude.

So — remember that wild ride feeling,

and wanting to do it all over again as soon as you get off? The ride gets smoother as you apply improvements that you (or others in your place) learned along the way. The next project was even more fun, but that's another story.

AUTHOR CONTACT

A long-time veteran in the online learning field, Brenda Boss works with large corporations to identify and implement learning solutions that drive business results. Her role is to provide the vision for performance improvement initiatives reaching across creative, technical, and business requirements. Her experience includes a variety of industries (retail, hi-tech, automotive, financial services, manufacturing) and spans employee, business-to-business, and consumer audiences. An entrepreneur, Boss founded UserView, Inc. in 1986, an interactive design agency, which was acquired in 2000 by BI, an agency headquartered in Minneapolis, Minnesota. After the acquisition, Brenda spearheaded development of BI's Learning Management System and she currently heads business development for the Interactive Learning Strategies Group. She can be reached by phone at 952.563.2950 or via email at brenda.boss@biworldwide.com.

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