Chapter 3

Utilizing Learning Guides to Maximize e-Learning at Motorola

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Comments from e-Learners

"The study guide gave me something I could read in bed."

"More, and more complete outlines."

"I wanted something to take away from the e-learning, like the stuff you take away from a classroom."

MOTOROLA HAS BEEN RECOGNIZED FOR YEARS in business and industry as a leader in supporting the learning and development requirements of its employees. Motorola established Motorola University in 1981, which was years before most corporations recognized the strategic and performance benefits of a strong organized effort to support employee training and development.

What Motorola University found out in the late 1990s after deployment of an online course delivery system was that only 7 percent of employees who accessed the online training completed the training courses they registered for. Was it because employees did not find the training beneficial? Tests previously conducted verified industry standard results that, when an employee completed

an online course, there was relative satisfaction that the content met the training need, the course was easy to use, there was a higher retention rate, and the learner was able to complete the same learning objectives in a shorter period of time than with an instructor-led classroom-delivered course.

So in 1999, Motorola University set out to establish some best practices for using online training in order to address these issues. Credit must be given to Jim Frasier, a former Motorola University manager, for designing and managing the team that undertook the task of researching and documenting some best practices for optimizing e-learning usage at Motorola.

RESEARCH QUESTIONS

As stated earlier, Motorola was only seeing a 7 percent completion rate by employees of the e-learning courses they started. What was just as troubling was that, of those who registered for specific e-learning courses, 69 percent had not even started a course. The three top reasons given for not starting or completing the training were:

1. Did not have time to train at work.
2. Had problems downloading files.
3. Had problems in signing on and using passwords.

It became clear that there were both environmental as well as online system problems leading to low levels of e-learning usage. A series of research questions was formulated to give some direction as to understanding what needed to be done to improve the usage of e-learning and respond to the reasons given for not starting or completing:

- What are the "best practices" for accelerated roll-out and user acceptance of e-learning?

- What is the model, or system, required to create a "best practice" learning environment for e-learning?
- What are the critical elements of the model that will yield the largest return with the smallest investment?
- What is the implementation process for accelerating the worldwide roll-out and increasing user acceptance of e-learning?
- What is the cultural shift and change management process required to accelerate the worldwide roll-out and increase user acceptance of e-learning?

A concept was devised and implemented in a systematic, research-oriented fashion, aimed at resolving the key issues. The concept involved the creation of a "Learning Guide" to provide and offer online assistance to e-learning students. If a Learning Guide were to contact the learner and offer guidance on best practices for e-learning and offer assistance when needed, it was felt the lack of time to train and technical difficulties identified by the learner could be addressed and, hopefully, overcome. Thus, the Learning Guide could be considered by the learner as a contact point, providing assistance in any aspect of support required, whether it be the use of the courseware itself or use of the technology delivering the courseware. From the learners' perspective, the Learning Guide would embody a personality, offering tips, instructions, and ideas on use of the e-learning courses. From the training department perspective, which is responsible for supporting learners, the Learning Guide would consist of any electronic messages, published information, or human contact with an e-learner that would have consistent communication methodologies, giving the learners the sense they have a "personal trainer" to assist them in any aspect of an e-learning engagement.

Other important issues that surfaced from anecdotal evidence regarding use of e-learning were also considered. One was the understanding that, as employees came out of the typical instructor-led

classroom environment to achieve their required learning through the formal education system, it is clear that the learning process was a largely other-directed effort. This environment thus became their preference and comfort level for learning. Since e-learning requires the learner to be self-motivated, it was hoped the Learning Guide would be perceived as a similar level of support that a teacher would offer in the traditional classroom setting. Other considerations needing to be remedied were that if an employee was engaged in training at his or her desk, it became difficult for the employee to ignore the work that needed to be done there due to interruptions by the phone or people who dropped in, and/or the learner's manager perceived the employee's workload as insufficient since the employee seemed to have time to do training at the desk. Also, since employees always made time to attend classroom-delivered training and the manager accepted attendance in classroom courses as legitimate time away from the job, it was hypothesized that cultural shifts were required to resolve these issues.

RESEARCH PLAN

An action research methodology was deployed whereby the research team implemented the Learning Guide process and monitored the results simultaneously. No announcement was made or indication offered to the learners while the study was undertaken. Therefore, the subjects never knew they were being studied, making the Hawthorne effect a non-issue. (The Hawthorne effect is where individuals in a study will be aware of the fact they are being studied and will behave or respond differently knowing they are study subjects.)

The Learning Guide process consisted of several steps:

1. When an employee registered for an e-learning course an email message would be sent from the "Learning Guide" that looked like this:

> This email is coming to you from Motorola University. Our records indicate that you recently enrolled in NT migration training at your desktop.
>
> MU has four suggestions that will help you to have a more successful training experience. MU recommends:
>
> 1. Print out the attached sign. Post the sign on the back of your chair when you are training at your workplace.
> 2. Turn off or unplug your telephone when training.
> 3. Schedule training time on your calendar. Then honor your personal commitment to train on the dates and times you schedule.
> 4. Find a co-worker who is knowledgeable and willing to help you with questions that you may have when you are training.
>
> OR
>
> If you prefer learning away from your work area, use the attached map to find the location of your facility's Self-Directed Learning Lab.
>
> Right Knowledge Right Now—Happy Training!

2. After four days, another email message would be sent to check the progress of the learner. This message would ask whether he or she was having any difficulty. If so, the Learning Guide was available to assist.
3. To engage the manager in the process, the Learning Guide would send the following email message to the learner's manager:

> I am a learning guide for computer-based training at Motorola University. Our records indicate that one of your reports (employee's name) has registered to take NT migration training at his or her work station.
>
> MU research indicates that when managers meet face-to-face with an employee to plan how best to complete training at the desktop, the employee's
>
> - Commitment to complete training is significantly increased.
> - Learning cycle time is significantly decreased.
>
> Please take a moment to talk with (employee's first name) and determine how you can help support him or her having a successful experience while training at his or her desktop.
>
> Best regards,
>
> Jim Frasier
>
> MU Learning Guide
>
> Right Knowledge Right Now

4. After four days, the manager would be sent a follow-up email asking whether or not the manager was able to review the employee's e-learning progress and help establish a positive learning environment for the employee.

The research design was established to measure the effect of the Learning Guide on the use of e-learning. Three research groups were defined: a control group consisted of learners who registered for an e-learning course and did not receive email from the Learning Guide. One experimental group consisted of those who registered for an e-learning course and received the email and a follow-up email from the Learning Guide. A second experimental group consisted of managers of learners who registered for an e-learning course and received the email and a follow-up email from the Learning Guide.

The results of the study were as follows:

1. The control group (the group receiving no Learning Guide email) had a 30 percent start rate, or about the same as before the study took place, which was at 31 percent.
2. In the first experimental group (learners receiving email from the Learning Guide):
   - Eleven percent of the learners replied to the Learning Guide after the first email from the Learning Guide.
   - Ninety-five percent of the Learners exchanged email with the Learning Guide after the follow-up email.
3. In the second experimental group (managers of learners receiving email from the Learning Guide):
   - Five percent of the learners' managers replied to the Learning Guide after the first email from the Learning Guide.
   - Sixty-eight percent of the learners' managers exchanged email with the Learning Guide after the follow-up email.

The study also revealed that twenty-four-hour follow-up email from Learning Guide to learner AND learner's manager resulted in

80 percent of learners starting training (compared to the 30 percent start rate of those in the control group who received no email from the Learning Guide); not one manager expressed irritation at the emails or repeated contact by the Learning Guide; and in follow-up interviews, it was found that when the learner's manager becomes involved in discussing training at the employee's desktop, having time to train in the workplace does NOT continue to be a problem expressed by learners.

FINDINGS FROM THE RESEARCH

Establishing the use of a Learning Guide can be a key factor in helping establish an environment that is supportive for desktop e-learning. The fact that an 80 percent start rate for e-learning occurred after receipt of the first Learning Guide email was more success than the research team ever anticipated.

As the findings suggest, when an external influence is placed on an individual to achieve a goal, there is greater likelihood for success. As to the completion rate (which was at 7 percent before this study was undertaken), the research team did not monitor that result. The Motorola University e-learning team managing this research determined that completion rate for e-learning activity was not important. The entire concept around e-learning is to provide the learning when it is needed and what is needed. When learners engage in e-learning activities, they are empowered to get out of it what they need and are not required to complete the course. This fulfills the promise that e-learning has offered all along—to provide the right learning to the individual learner and reduce the amount of time needed to get it (thus a tremendous time savings and increased productivity by using the saved time to do the job they are paid to do).

Another question addressed was how to improve e-learning engagement without spending a lot of money. Use of email as the vehicle to communicate a Learning Guide concept requires almost no cost at all. A program can be written to automatically have the

Learning Guide emails go to registrants as a response to their registration. Since the registration process is electronic, the program would automatically trigger sending the email and follow-up email, requiring no human intervention.

Of significant importance, this research addressed the issue of the cultural shift requirements as e-learning is adopted. Without the support mechanism that the Learning Guide offers (and replaces the teacher in the classroom), a new methodology for learning is foreign to the learner and learner's manager, so one cannot expect them to inherently know how to adapt to the new methodology. This, then, becomes the job of the learning professional—to analyze the situation and determine the best way to introduce new learning methods to the employee population, taking into consideration learning theory and the overall learning environment. Today, learners are required to be more self-directed in their learning activity, but the learning professionals cannot expect the learner to automatically know how to adapt and make best use of the new learning opportunities that are emerging.

Nicholas Negroponte, in his book *Being Digital,* suggests that the paradigm shifts we are facing in going from an analog to a digital world are generational. As we develop more electronic means to educate the population, the concentrated effort to help the population make the transition to using those electronic methods is only required for the current generation of learners. The generation following, already adept at using the latest electronic devices, gadgets, and games, and proficient with the Internet, will not only NOT need the transitional intervention the current generation needs, but will EXPECT to learn using electronic means. This then suggests that the use of the Learning Guide to replace the teacher and educate the manager should only be a short-lived phenomenon. However, as learners become more self-directed in their learning, other even more perplexing issues are emerging for the learning professional to address, many of which we cannot even conceive today.

About the Author

Richard Durr, Ed.D., is a director at Motorola University in Boynton Beach, Florida. He is extensively involved in the deployment of e-learning to the 100,000 employees of Motorola. He has authored and co-authored several articles on self-directed learning modalities for professionals in the workplace and implementation of self-directed learning processes at various workplace locations around the world. He is also an adjunct professor for the Educational Leadership Department at Florida Atlantic University, Boca Raton, Florida.