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Technology's Impact on E-Learning

By Jennifer Hofmann

The fourth critical success factor to creating effective, online learning environments is useable and accessible technology. However, useable and accessible technology means more than a system that operates. It requires technology that works efficiently, access to support tools, and programs that are designed to effectively use the technology. More important, designers and developers must orient learners to the new environment.

Mastering the technology

Probably the most obvious impediment to learning online is the technology: software, hardware, bandwidth--and being able to use it all. If you ask trainers, learners, and IT folks about what worries them most about e-learning, technology is usually first on their list. And although technology is making steady advances (for example, more bandwidth is available, hardware and software are becoming less expensive), there are still many obstacles that need to be overcome to ensure that learners have a positive online experience.

The first obstacle seems easy to remedy: make sure that each learner's set up works. Typically, training managers send out hardware and software specifications to learners, such as RAM, bandwidth, operating system requirements, and so forth. While this information is useful to the technical support contact, it generally doesn't help the end user. To assist the end user, offer tips on how to test the software or system to see whether it meets the minimum requirements. For example, if a sound card and speakers are required, link them to a Website that has sound. Another way you can assist users is to send them a set of questions that they can use to communicate with their help desk, including

- Is my machine equipped with a sound card that allows for audio-in and audio-out?
- What is my bandwidth access?
- What plug-ins (Flash, RealPlayer, and so on) are standards on my machine?
- What version browser am I using?
- Are there any firewall issues (for instance, if VoIP is used) or and Website access restrictions)?

Once the learner verifies that minimal technical requirements are met, be sure to provide contact information (phone number and email) for technical problems, such as password issues, system crashes, and so forth. Also, remind users to have a print copy of instructions handy because it won't help to have the information in their computer if it shuts down.

Lastly, it's critical that learners test their machines well ahead of any scheduled

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online activity. Too often, the first clue that a machine isn't responding appropriately, is when they sit down to complete their assignment or attend the program. Typically, this is too late to resolve the issue and results in a frustrating learning experience that leaves a lasting impact.

Prepare the learners

The next issue training managers need to address is how to ensure that learners can use the technology so effectively that collaboration becomes effortless. Even though many tools, both synchronous and asynchronous, are touted by suppliers as easy-to-use, participants still need to acclimate themselves to the new learning environment.

Enter the learning orientation program. Use the synchronous classroom to manage this process, and offer orientation to learners on a regular basis. During the program, give participants permission to be frustrated and ask them to share their dissatisfaction during class. You want to alleviate their aggravation here, and not let it carry over to content-oriented programs.

In this orientation, consider including the following items:

- a tools overview that instructs learners on how to use the different technologies
- communication guidelines that emphasize the importance of participating actively and completing all assignment
- ground rules to instruct learners about what is acceptable and not acceptable in this new learning environment, such as logging in early, completing self-directed work prior to live events, and how to "step out" of class, and so forth
- tips on how to maximize the learning experience from their own desk, such as how to minimize interruption, maintain focus and concentration, and communicate with their managers and peers about the learning process
- descriptions of the various program components. For example, you may have an asynchronous discussion board supporting multiple live, online events, which may be supplemented by a printed participant workbook with assignments that need to be completed by specific deadlines.

Also, it's a good idea to ask the IT support team to participate in online orientations and events so that they understand the environment they need to support. This insider experience may make them more empathetic to the time-is-of-the-essence pressure the learner faces.

Tone down the bells and whistles

Another thing that developers can do to minimize the focus on technology is to resist the lure of using all the bells and whistles. Make certain that any tools used support the learning objectives rather than flaunt programming skills. For this reason, it's crucial to include the instructional designer in the development of multimedia tutorials. Don't simply surrender the development to a programmer and assume they're going to create the best environment.

Likewise, the instructor should participate in program development as well. For example, before the instructional designer decides to use a self-directed multimedia tutorial, he or she should participate in courses that use the same format in order to identify best practices in exercise design, screen design, and navigation. Also, programmers, instructional designers, and instructors should attend live events (or watch recordings of live events) to fully understand the

learner experience.

To be sure, technology expands our ability to disseminate learning across our organizations. But no matter how popular the latest tool or technology, keep in mind that our mission is to build well designed programs that effectively meet performance objectives. Ensuring the effective use of technology for the learning environment, lays the groundwork for creating online programs that are as effective (dare I say, more effective?) than traditional training events.

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