A blue book with a red bookmark is shown next to a computer mouse. The book is open, and the mouse is positioned to the right of the book. The background is white.

Instructor-led training
still remains the preferred
method for information-
technology training.

Some
IT TRAINING
Remains
Traditional

By Michael Laff



For six days, Jason Hebbe was holed up in a boot camp absorbing as much knowledge as he could during 10-hour sessions with breaks for meals. He was not prepping for overseas deployment. Instead, he was mastering the intricacies of Linux.

Hebbe just completed a boot camp offered by Training Camp, a Philadelphia-based institute that offers advanced information-technology training. Having worked with the Linux operating system intermittently for two years, Hebbe learned from trade magazines that it is a stable operating system worthy of attaining certification status and not just an angry reaction to the persistence of Microsoft Windows.

Instead of the usual training that resembles late-night cramming for a college entrance exam, Hebbe left the program believing he could use many of the tools he acquired immediately upon returning to his job as a systems administrator. With only seven people in the class, there was ample opportunity to get hands-on practice under an instructor's supervision. And yes, he did pass the certification exam for Linux.

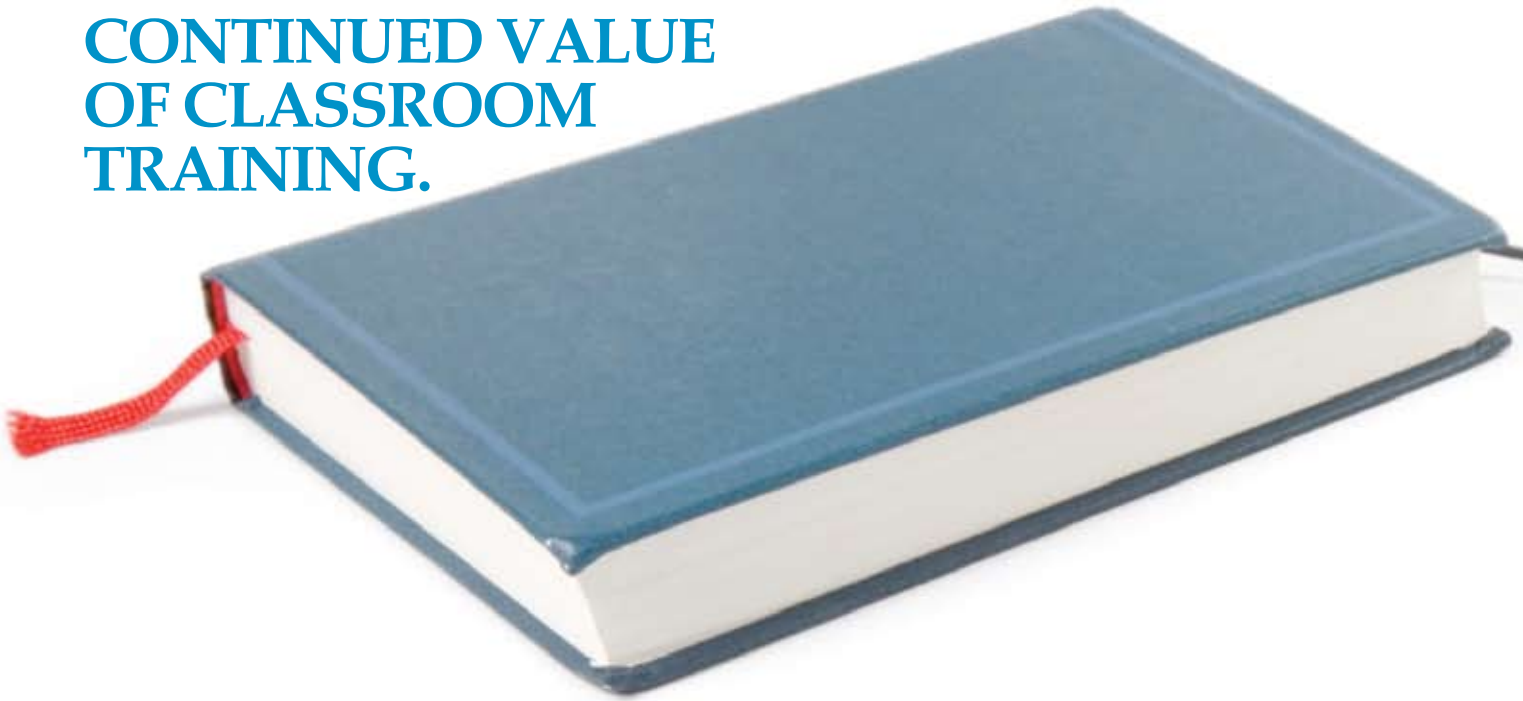
"They teach students what you're expected to know in the real world," he says. "It's not focused on passing a test."

Hebbe attended another boot camp for Microsoft hosted by a third-party training provider and found it to be little more than a test factory.

"They taught you just what you needed to pass the (certification) exam," he says. "I didn't appreciate that approach."

Online training, blended learning, and other upstart methods may be the rage as organizations move away from traditional classroom instruction, but in the IT field, instructor-led training

THERE IS AN ONGOING DEBATE ABOUT THE CONTINUED VALUE OF CLASSROOM TRAINING.



remains the preferred method for many applications. Especially for fields such as network engineering and programming, there is no substitute for time spent in a classroom. It is a small irony that while training professionals in other fields are wrestling with the best way to offer active learning in the digital age, intensive classroom curriculums are still widely available for IT professionals.

There is an ongoing debate in IT about the continued value of classroom training. As with other fields, employers are reluctant to send staff off site for three or four days of training. Dave Meisner, vice president of solutions services for Prometic in Baltimore, says that many organizations decided that training received in online segments is the wiser investment.

"IT has struggled for decades with this," he says. "The field is so dependent upon a bricks-and-mortar training environment. One camp says instructor-led training is valuable while the other believes it is outweighed by the speed and convenience of online or computer-based training."

Meisner says the best outcome would be some kind of training built with artificial intelligence that can tailor the curriculum to the needs of the learner in an interactive format, offering instruction based on what the trainee already knows. Some modules are heading in that direction, albeit slowly, with the creation of online training links.

Captive audience

An aggressive help tool embedded in the software is emerging as the best method to train individuals who are traditionally averse to technology. Shawn Rosler, a systems analyst for Geisinger Health Systems, developed a training regimen for electronic medical-records management at the Pennsylvania-based medical center. The program utilizes Adobe Captivate, which provides a simulated screen shot of the data and guides trainees through each step.

For training on software applications, Adobe Captivate is widely praised as one of the best platforms for teaching employees how to navigate

a new or updated software program. Instead of the traditional lecture-and-absorb method of training, Captivate enables users to follow through the database step by step. When participants click on the wrong icon while managing data, the program leads them to the proper step. The ease of use has proven especially favorable to physicians, who are not considered the most patient users in front of a computer.

"Users are not trapped by not knowing an answer," Rosler says. "They are taken to it. It's a guided interactive tutorial."

Organizations that rely on online transactions are in constant fear that their databases are vulnerable to hackers. A simple programming oversight can make the data field that requests a consumer's credit card number vulnerable.

A more subtle approach to training, using online links, is taking hold even among more advanced technology workers who might stumble while writing code. WatchFire, a Massachusetts-based software security compa-



ny, developed AppScan, which simulates an attack on a site by hackers who are searching for weaknesses in the program's code that can be exploited.

The online training consists of eight hours, broken into 15-minute segments. The training reports provide a link to the online training needed to correct common mistakes made by programmers.

"Software developers are not trained on how to write secure code," says Mike Weider, chief technology officer of WatchFire. "They are trained in Java."

The company also offers a free training course on the application called "Hacking 101" that lasts three hours.

Training observers cite the new technologies unavailable just five years ago, such as online video or podcasts, and the influence they have upon the new generation entering the workforce.

That is not to say that IT specialists prefer textbooks and desks to hacking away at the desktop. Training designers

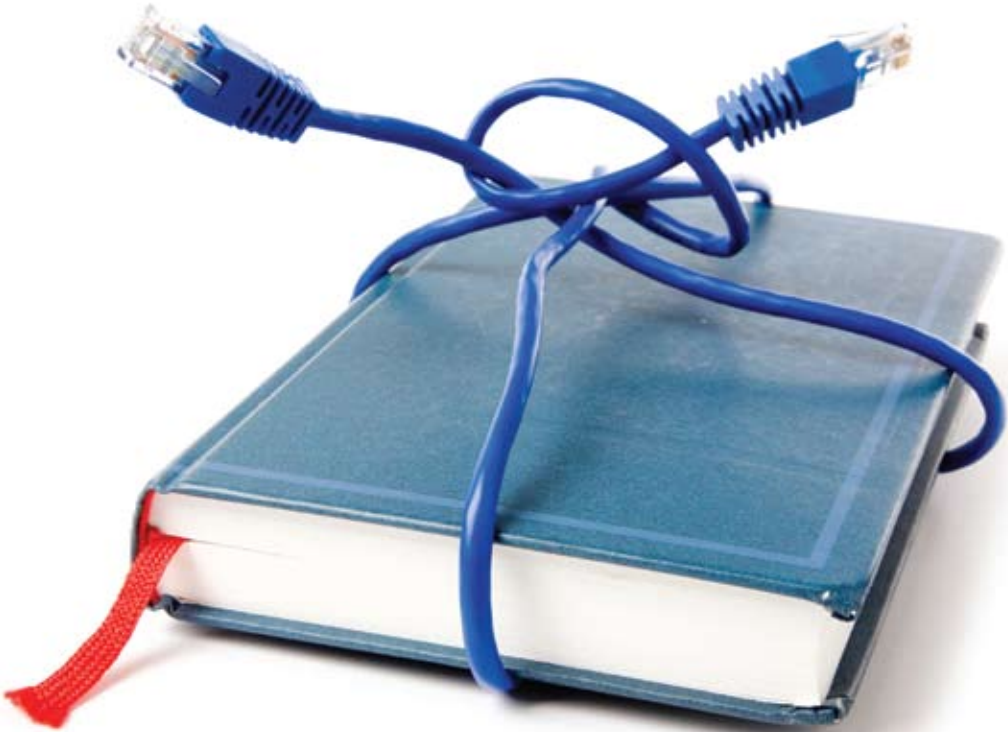
emphasize the impatience of many IT learners who would prefer to dispense with weighty instructional manuals and practice a particular application on their own.

"The IT workers in Generation Y learn by breaking things," says Ellen Leinfuss, chief marketing officer for Kaplan EduNeering in Princeton, New Jersey. "The last thing they want to do is sit in a classroom. When they are given something to do, they want to figure it out on their own. They might discuss how they solved it afterward."

Leinfuss recalled with surprise when her son searched YouTube for a lesson on how to use PhotoShop. She says it would never occur to her to search the popular video site for a primer on using software design. The upcoming generation has been bred on video games, so moving training to the game platform increases the likelihood that the information will be absorbed.

Back to school

One university devotes its curriculum to preparing project management-ready



IT professionals, a highly prized skill in the current market. At Neumont University in Salt Lake City, Utah, students obtain the equivalent of a four-year degree in two years. The curriculum was born out of the increasing demand for technology companies to hire ready-to-work graduates, many of whom were coming out of even the most prestigious universities unprepared to handle routine job functions.

“Entry-level employees in IT don’t have the competence to do the job,” says Graham Doxey, the university’s president. “Students at the Massachusetts Institute of Technology (MIT) have demonstrated that they’re very smart people. They know how to write code, and they know how technology works, but they don’t know how to solve problems when working with customers.”

Initially Neumont students work on a simulated project during their first quarter. Then they move on to work directly with faculty on actual client projects that faculty handle as consultants outside of their teaching responsibilities. The curriculum combines instruction with a heavy dose of

apprenticeship in what Doxey calls an “internship on steroids.”

More and more technology employers are demanding project-management experience, especially external projects that require dealing with a customer base. Doxey says that information management, information security, and IT staff with business intelligence are also highly desired qualities.

Best in class

Instructional designers believe that classroom training is likely to remain a staple of training delivery, especially for complex tasks such as network engineering. Training for Cisco engineering, for example, will still require sending staff members to a three- or five-day training boot camp.

“Classroom training is still needed,” says Alexa Krezel, an instructional designer with C² Technologies in Vienna, Virginia. “Engineers say that they need to get inside the box that they’re going to wire. It’s like auto repairmen. They have to be able to touch the vehicle. Simulations only take you so far.”

Simple technology upgrades can be overcome with a detailed addendum or quick reference guide, which are items Krezel often developed during her tenure. Whenever a new version of a software application was released, Krezel drafted a one-page summary explaining to users where particular files could be located and how they could navigate their way through necessary shortcuts. Substantial upgrades to a particular application pose a much greater challenge, however.

“Whenever the technology change is greater, the amount of instructor-led training goes up,” she says.

A typical example is the recent launch of Windows Vista. Previous iterations of the Windows system were handled easily. Vista is slowly being adopted among business users in large

part because of the difficulty for the user. In Vista, the Microsoft Office suite looks completely different from previous versions. Users can still switch to a classic menu setup, but the overall interface is new. Some practical function buttons are hidden. Other icons are larger than in the past.

A number of organizations are expressing difficulty with navigating the new system, Krezel says. She predicts that some organizations may be required to send staff members for instructor-led training for Vista.

If any concept is in need of continual improvement, it is the change-management phase following the introduction of a new application or hardware. Krezel recalled the difficult transition that law firms had to make a decade ago when they had to forgo using WordPerfect and move to Word. Many of the shortcuts employees used for accessing files would be lost, causing a great upheaval.

“Change management is still not done well,” she says. “IT training gets lost. It has to be about more than just an IT product. A lot of the training is not tied to a job task.”

In such cases, simply substituting one application for another is not sufficient, she explains. Job tasks need to be analyzed to determine how long an individual will need to adjust his time to reach the previous level of efficiency—a crucial step many organizations do not take.

Another often overlooked aspect of training that is basic to IT is the desire for interaction among peers. IT workers relish the opportunity to discuss analytical and problem-solving techniques with colleagues. Krezel says the ideal way to offer blended training to IT workers would be four weeks of classroom instruction with participant interaction and then four weeks participants working on their own to build skills and learn techniques.

In the race to create engaging, bite-size training material at low cost, training officials should not forget that online learning is still in its infancy. Even the more advanced and resource-rich companies were slow to redesign their learning systems.

While working for Intel as the e-learning technology manager, Frank Nguyen recalled that as late as 1999 the company offered roughly 400 instructor-led courses and employed 100 instructors. The economic downturn beginning in 2000 and the terrorist attacks in 2001 led to a reduction in the number of instructor-led classes.

By 2003 another element of IT training changed. Intel devoted more

course. They just follow it and then shut down the application.”

As is occurring in other fields, much of the best training delivery is customized for a particular audience and is difficult to replicate for general use. Whether any online system can overtake the value of direct classroom instruction seems unlikely at this point. Meisner and other training analysts reason that as IT workers spend all of their time in front of a screen each day, a computer-based training module is not always suitable for everyone.

“Some people do not learn best in a computer-based environment,” Meisner says. “Online training is only one

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effort to developing effective online help tools. When a user gets stuck on a particular application, there is a link to an online training program lasting a few minutes. Called the “performance port,” the online help tool is often purchased off the shelf and then redesigned for internal use. The help items are much more subtle than some of the more notorious elements of Microsoft products.

Nguyen, now manager of emerging technologies for American Express, says, “it’s not like Clippee,” referring to the much maligned character in Microsoft applications that tries to help users. “It’s less intrusive. Users don’t realize they’re in a training

option. This will be a constant (debate) until there is some means of truly assessing in real time how effective the training is.” **T+D**

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