

Playtime: Learning IT

CARRI MCLEARN

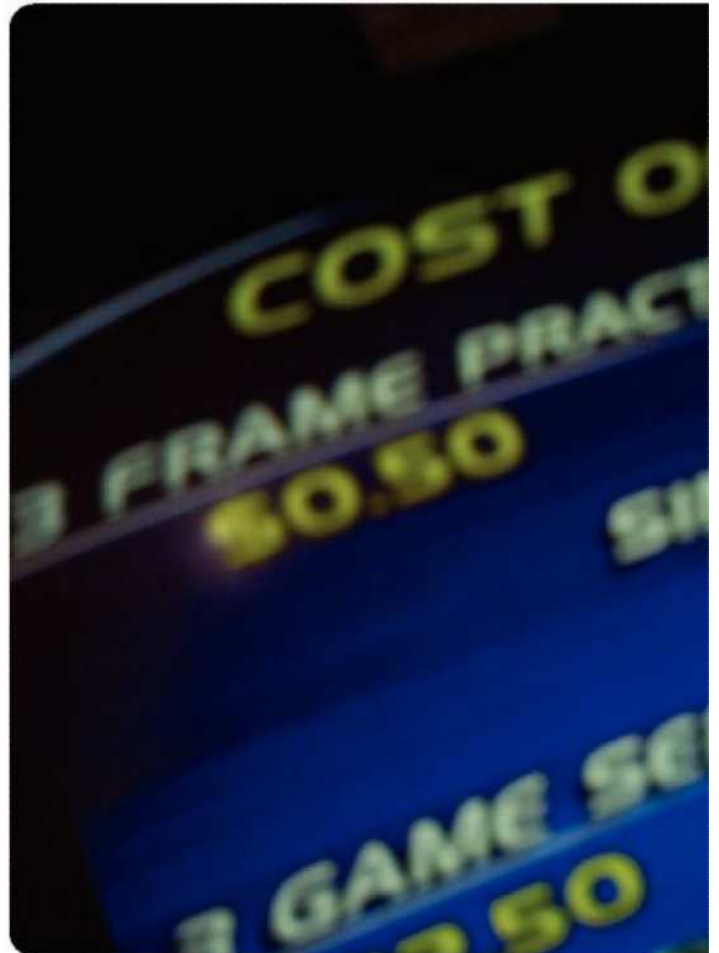
Whether they are old standbys such as chess, poker or UNO, timeless games such as Trivial Pursuit and Monopoly, video game classics such as "Pitfall!," "Donkey Kong" and "Dragon Warrior," or modern video games such as "The Sims," "Grand Theft Auto" and "Final Fantasy," games are a dominant source of entertainment for people of all ages. Although the entertainment factor is the main draw for playing games, they can offer players a good deal of education, as well.

For example, Monopoly teaches individuals at an early age how to manage money and acquire properties. "The Sims" teaches individuals to fend for themselves, as they are required to shelter, clothe, nourish, protect and entertain virtual people in a simulated, real-world environment.

Adult-education providers, however, had not accepted "learning games" until recently. In fact, the budding professionals entering today's business world are driving this acceptance of gaming solutions as a viable tool for adult learners to practice their skills and increase their competence as professionals.

As the first generation bred on personal computers, the Internet and sophisticated video games, Generation Y favors alternative learning methods such as gaming solutions simply because they mirror their upbringing.

"From our perspective, clients are starting to recognize that there is this shift in the demographics of the worker base, and that shift is driven in part by the fact that all of these workers — workers under 35 — grew up playing video games," said Jim Wexler, executive vice president of marketing at BrandGames, a provider of custom-developed learning games and simulations. "This shift has in part led to a change in the way they need to be spoken to, messaged and trained. This dividing line of workers under 35 who have spent the last 10 to 15 years in



their basements playing on their PlayStations, PCs and Game Boys think differently. The old passive ways and the old ways of training them aren't as effective anymore."

David Serdynski, director of e-learning at Root Learning, a provider of education, communications and change management solutions wrapped in non-traditional delivery methods, agrees.

"Older workers are accustomed to an environment where an instructor pushes information out to them, whereas the younger generation has grown up with gaming, grown up with the Internet and are attuned to pulling out short nuggets of information when they want it, and when they need it," he said.

Through Gaming



Photograph by Matthew Taplinger

For most educators, however, the acceptance of gaming solutions for practice and learning has been slow in coming because of cost and lack of awareness.

"Money is the primary driver why many schools and corporations have not adopted such complex solutions, but it is not the only reason," Serdyski said. "Awareness is really another key factor. These more advanced simulations or gamelike simulations are relatively new — only within the last 12 to 18 months have these solutions really taken off. There's been a lot of buzz about it, but when you start to talk about the dollars that are involved with developing a truly complex Xbox-like game, the conversation tends to turn to, 'What can we do for our \$300,000 budget?'"

In information technology, the exercise of gaming solutions has been just as slow — the Cisco Systems CCNA Prep Center is the only certification vendor to offer such learning solutions to date. Cisco Manager of Learning and Development Christine Yoshida said her company continuously aims to increase its learning offerings and preparation options as a way to not only appeal to the learners of Generation Y, but to make learning fun.

"We are trying to appeal to learners of a younger generation who have grown up playing learning games on their computers — you know that's how they learned to read or to perform math equations," Yoshida said, "so there's an expectation that learning should be fun for these younger folks, and those are the ones we are trying to appeal to."

The CCNA Prep Center, which is a Cisco Internet portal designed to assist networking

professionals preparing for the CCNA certification, offers more than seven different learning games — some more conceptual than technical. Yoshida said the games that coincide with the CCNA certification particularly target the areas where certification candidates tend to struggle most.

"Our first games really focused on building awareness of a particular technology solution rather than teaching a skill," she said. "The Cisco 'IPC Rockin' Retailer' game is an example of a game whereby playing the game, you start to realize how a Cisco voice solution could really improve efficiencies within a store or business."

Don Field, director of certifications, Cisco, cited another game that has served a functional purpose.

CERTSCOPE

Gaming as a training technique is on its way. Search for "learning games" on CertScope to find several articles in the past year that go over this exciting subject.

"The Binary Game, as an example, is one that we created specifically in order to teach a skill," Field said. "Many of the learning offerings that we have in the CCNA Prep Center are more about reinforcing a skill or giving practice in a skill. The Binary Game is a little bit different because it actually teaches skills in understanding how binary numbers work.

"We have another game that is more oriented toward practice called the 'Certification Multi-Player Challenge Game: CCNA.' During this game, users are

being hit with questions, similar to what they would see on our exams. The neat thing about this game is users can actually play on the Internet with somebody else."

Although the Cisco family of games isn't as flashy and high-tech as some of today's high-tech video games such as "The Elder Scrolls IV: Oblivion," the games' sole purpose is to enhance certification candidates' skills in a fun, interactive way.

"For education in configuring different devices, entering commands and navigating through menus, online games or computer-enabled games really lend themselves well to that because you are on a device, and you can simulate the experience with the software," Yoshida said. "So when you are trying to study for a timed exam that includes a simulation, you are better prepared, and you won't run out of time. It is so helpful to have tools to practice at home and to have a tool that makes it fun because it can be pretty dry. It helps

CISCO LEARNING GAMES

All Cisco Systems learning games are available through the CCNA Prep Center, which is a Cisco Internet portal designed to assist networking professionals preparing for the CCNA certification. Open to anyone with a Cisco login, the CCNA Prep Center offers many resources at www.cisco.com/go/prepcenter, including practice questions, labs, simulations, tips, expert advice, peer discussion forums and, of course, these learning games:

Binary Learning

The latest addition to the Cisco family of learning games, "Binary Learning" aims to familiarize learners with binary numbers, a key element of networking. Intended to improve users' proficiency with the binary numeral system, which is used internally by virtually all computers today, this fast-paced, arcade-type game helps users internalize the language, so interpreting it becomes second nature.

SAN Rover

"SAN (Storage Area Network) Rover" is a game in which users traverse Mars in a Rover, building a storage area network. Specifically, this game allows storage professionals to test their knowledge and develop storage area network skill sets while navigating Mars to resolve their explicit mission.

Network Defenders

Picture being the master of a company's network security, battling against relentless, malicious hackers while simultaneously learning and practicing how to optimally defend a network. That's the Cisco "Network Defenders" game in a nutshell. This game puts users in control of their company's network security, allowing them to learn through trial and error, and striving to beat attacks by securing vulnerabilities before the hackers can even find them.

IPC Rockin' Retailer

"IPC Rockin' Retailer" enables users to learn the benefits of IP communication solutions while addressing issues with communication, inventory and customer service. Specifically, it tests the skills and strategy of users who are challenges to run IP Beats, a virtual popular music store and venue. Throughout the game

users are able to use a Cisco IP Communications solution of added features to help make the business more productive as each level of the game is successfully resolved.

Certification Multi-Player Challenge Game: CCNA

For those who are competitive, the "Certification Multi-Player Challenge Game: CCNA" allows users to go head-to-head against their peers while practicing for the CCNA certification exam. Similar to a game show, much of the competition depends on how fast a user or team of users rings the buzzer to answer the question. In addition to being a great way to practice for the CCNA exam, the game allows users to challenge and network with others who are in the game's "lobby."

Wireless Explorer

"Wireless Explorer" is an educational game designed to test networking knowledge and wireless skills for technical professionals. Specifically, this game allows networking professionals to test wireless knowledge and develop wireless skill sets through a space challenge. Players compete by ensuring friendly space aliens remain in wireless communication throughout their galactic voyages. Individual and team scores are based on successful site survey strategies, deployment skills and network maintenance.

Secure Volunteer

A game designed to test Virtual Private Networking (VPN) skills for technical professionals, "Secure Volunteer" combines the promotion of a philanthropic efforts with entertainment. Based on NetHope Inc., a consortium of leading international nonprofit organizations that collaborate around connectivity in remote parts of the developing world, users join as volunteers to enable connectivity and attain high scores. Users set up VPN connectivity to enable relief workers in the field to securely share environmental, health and medical information with headquarters. Throughout the game, users move about virtual rooms and interact with fictitious characters to configure a Cisco VPN concentrator.

*Stay tuned for additional learning games from Cisco.

people prepare, and it gives them more options to learn and practice. It can also motivate people to do their practicing to be successful in the exam."

Wexler agrees gaming solutions are excellent for technical-type training and practice because like Yoshida, he said these areas of study are not always very interesting.


"Certification can be very dry — it's often a 'check a box' or Q&A scenario, which doesn't necessarily fit with today's up-and-coming professionals," Wexler said. "So how do we make this highly multitasking, intelligent and sophisticated worker pay attention when it really matters? Games are one answer — they speak their language, they're relevant, entertaining and fun. For that reason, learners are likely to participate, be focused and find the experience worthwhile. That is the big benefit of games."

Serdynski said gamelike simulations allow people to comprehensively apply their knowledge and practice their skills in a safe environment.

"Users can practice over and over again without ever

having to have a conversation or making a sales call to a customer, for example," he said. "So, essentially, users practice without ever having a negative experience with a real customer. During such simulations or games, it's the repetition and targeted feedback that allow them to become successful in executing those skills before they ever hit the marketplace."

Although gaming solutions are thought to be an excellent way to practice and further a professional's knowledge and skills, Yoshida, Field, Wexler and Serdynski said they are best used in conjunction to other training modalities because not everyone learns effectively through gaming.

"In order to reach the widest possible set of learners, it is important to have learning available in a variety of different ways," Field said. "Cisco will continue to explore the different learning modalities and continue to introduce things that will provide the widest possible array of accepted learning modalities for those that are seeking Cisco certifications." 

—Cari McLean, carim@certmag.com



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