Job exam piracy rising (Dec 07)

Websites aid test cheating by professionals

By Alan Wirzbicki and Kevin Baron, Globe Correspondents | December 26, 2007

WASHINGTON - For $30, anyone can buy answer keys for tests required to become a computer technician. A retired medical professor in Georgia allegedly sold answers to pharmaceutical license exams for $100. A website in Ohio offers a "VIP Pass" to answers for a business school admissions test for $30.

Pirated answers to hundreds of professional qualifying exams, in fields ranging from school-bus driving to medical technicians, are openly available, sometimes for as little as $4 each, from a thriving network of cheating websites, The Boston Globe has found.

As many industries move to require certification by examination, the trade in crib sheets has emerged as a lucrative and well-organized global black market. One operator in Oregon made $700,000 in about nine months before his arrest; the owner of the Ohio website pocketed more than $300,000. A Pakistani who sells stolen answers for computer technician exams proudly displays photos of a stable of luxury cars on his website.

Recently, the dangers of Internet-based cheating have become more apparent. The Globe reported earlier this month that tens of thousands of soldiers obtained answers to tests in a range of military skills from websites. The Army case was especially egregious, testing specialists said, because even modest measures that are widely used to prevent cheating weren't in place. The sheer number of Army cheaters also surprised some testing specialists.

But private-sector certification groups say they, too, are increasingly finding the answers to their exams available on the Internet.

"It's impacting any industry or any business that certifies or licenses," said Susan Underhill, vice president of Hewlett-Packard's global certification program.

In all, test officials estimate that hundreds of thousands of test-takers have used the Internet to buy answers on a wide array of professional tests. A recent testing-industry survey of groups that offer certifications found that 28 percent had at least one cheating incident over the last five years.

Some cheaters connect on mainstream websites like eBay, where caches of test answers known in Internet slang as "braindumps" are routinely offered for sale. In one case in 2004, a New Jersey man auctioned answers to an exam to become a Microsoft-certified technician at least 140 times on eBay before Microsoft was able to stop him.

Some of the biggest players in the trade are overseas websites like TestKing.com, the site owned by the car enthusiast in Faisalabad, Pakistan, that specializes in answers to technology tests. Officials at test-security firms estimate that the site sells about 146,000 sets of answers and takes in about $10 million per year.

The rise of cheating has paralleled the increasingly large role testing plays in the American workplace. Over the last 15 years, hundreds of businesses and trade organizations have instituted formal certification programs to measure and verify employee skills, meaning that many working adults are still sharpening No. 2 pencils and trudging to privately run testing centers,

where most exams are administered, well into middle age.

But the more that tests determine a worker's salary and job prospects, the greater the threat of cheating, said Graham Brent, executive director of the National Commission for the Certification of Crane Operators, which in 2005 discovered that a test proctor had accepted a $500 bribe in exchange for advance copies of the commission's test content.

"That's usually where you see people trying to take risks - on tests on which their livelihood depends," Brent said. The tests cost a half-million dollars to develop and had to be rewritten after the proctor sold the answers, he said.

Testing professionals criticized state and federal prosecutors for often refusing to pursue cheaters, arguing that cheating on professional exams costs millions of dollars and can risk lives.

"These guys that are stealing items, they're hurting everybody," said Kirk Lundeen, vice president of Integral7, a management firm in Minneapolis that handles certification programs. "People can pass tests, essentially, without the real knowledge. That is a systemic failure."

The number of corporations and private-sector trade groups issuing certifications has exploded since the 1990s, according to industry observers, due in part to new government regulations.

Fifteen states now require crane operators to pass a certification test. Twenty states require court reporters to hold certifications issued by a trade group. This year, Massachusetts prohibited financial planners from calling themselves "certified" unless they had passed a recognized certification exam, a change adopted after reports of financial services firms selling dubious financial products to elderly state residents.

"We are in a credentialing society," said Leon Smith, the president of Professional Examination Service, a nonprofit test association that promotes certifications as a public good. "If it moves, we develop a test and we test it."

At least 2 million exams are taken every year for information technology certifications alone, test officials said. Though the term IT may conjure up images of the office technician, testing officials note that it covers such sensitive areas as protecting defense installations and making sure that medical equipment works properly.

"We live in a world where IT supports everything," said Underhill, the executive in charge of Hewlett-Packard's certifications. She said that "67 percent of the world's money runs through an HP system every day." HP systems are also in many 911 call centers, she said. The Defense Department recently required that all its IT security workers become certified, and that all military contractors use certified security technicians, within five years.

Such certifications can add up to $35,000 to a computer engineer's annual salary, according to a 2007 survey in Certification Magazine.

Brad Reese, a job recruiter in North Carolina who helps Cisco-certified computer engineers find jobs, said that certifications are particularly coveted in the developing world. "It's the ticket to prosperity for people from Third World countries," Reese said.

But the rise in international certifications has also made cheating easier and more prevalent. Many of the copies of exams used for cheating come from developing nations, both because of lax security and some cultures that condone the sharing of exam answers.

Randall T. Trask, a vice president at Pearson VUE, one of the largest test-administration firms, with 5,500 test sites in 162 countries, said that the pressure on some test-takers in foreign countries is enormous, explaining why they resort to cheating.

"You can talk about people who would memorize an entire book . . . so that they don't shame themselves and their families by failing," Trask said. "You've got cultures out there where people commit suicide if they fail exams." In some Asian cultures, specialists said, sharing test answers is considered collaborative learning.

"Culturally there is a very different approach to testing and to learning [in Asia] than the Western world is accustomed to," said David Meissner, a vice president at Prometric, another leading global test company.

Cheating in some Asian countries is so rampant that Microsoft no longer tries out new versions of exams in India, China, and Pakistan - countries that account for nearly half the world's population - after finding that answers to draft questions tried out in those countries were appearing online almost immediately, according to Shon Hong, a Microsoft security specialist.

Mark Lane, vice president of the Federation of State Boards of Physical Therapy, which administers about 16,000 exams for physical therapists every year, said his group invalidated 20 test scores in the Philippines last year after discovering that a local training-center operator had distributed test answers and posted them on the Internet. "It's getting worse," Lane said of cheating on certification tests. "Technology certainly makes it easier to cheat."

But Lane said it would be a mistake to see cheating as predominantly a foreign problem. The social mores that might once have deterred cheating are breaking down across the world, he said, including in the United States.

"Cheating is much more acceptable," he said. "There's that whole drive to get ahead."

The best way to prevent cheating is to make sure that no one can steal the tests. Once they become compromised, as happened with hundreds of Army exams, there is no fully effective way to prevent cheating without rewriting the questions.

But the rise of the Internet has created such a vast market for cheat sheets that thieves will go to extraordinary lengths to get copies of the exams.

At a recent test-industry conference in San Antonio, a Utah-based security firm presented a lineup of tools used to steal tests, including tiny button-hole cameras, a document scanner disguised as a pen, and digital watches with concealed cameras.

"These folks have created a new industry," said Steve Addicott, a vice president at Caveon, a Utah-based security firm that audits test results using sophisticated mathematical algorithms to identify suspicious patterns.

Some of the devices deployed by those stealing exams are widely available. Button cameras cost about $400 at specialty stores. A document-scanning pen that produces legible scans of paper tests sells for about $250. Some thieves have also used more traditional means. One favored tactic, according to test administrators, is for a group to take tests repeatedly until they can memorize the entire exam between them.

A website operator in Ohio pieced together a copy of the GMAT, the business school admissions test, using this method and charged $30 per download. The operator was sued by the

organization that runs the GMAT in 2007; court records showed he had made at least $317,000 since 2004.

Other cheat-profiteers simply bribe proctors. For instance, a man in Pakistan allegedly paid a local test proctor for answers to exams offered by Microsoft, Cisco, Oracle, and other technology companies and sold them in 2001 to the 25-year-old operator of an Oregon-based website, cheet-sheets.com, who then made more than $700,000 selling the answers before he was apprehended by the FBI.

The Oregon website operator, Robert R. Keppel, garnered almost all of his profits in a nine-month span, and used them to buy a Lexus for his mother and Ferrari for himself. Keppel was forced to pay back the money and spend 10 months in prison after pleading guilty to economic espionage.

But Keppel's prosecution remains a rarity. Microsoft was unable to persuade federal prosecutors in other jurisdictions to file criminal charges against cheat-site operators.

A spokeswoman from the Department of Justice's Computer Crime and Intellectual Property Section declined requests for an interview, but testing officials said police and prosecutors often do not consider cheating on exams to be worth investigating.

Mark Poole, director of security for Pearson VUE, said he knows of only a few prosecutions related to cheating.

"I've worked with . . . the FBI," Poole said. "But when you think of all of the types of issues that they deal with and the cases that they take on, this isn't the sexiest thing that they want to be working on."

Federal regulatory agencies have recently confronted cheating scandals in public-safety areas. In Denver, airplane de-icers allegedly received answers in advance to a certification exam, prompting the Federal Aviation Administration to investigate. In San Diego, city employees allegedly used answer keys to cheat on a Department of Homeland Security exam, triggering a DHS probe.

But trade associations say that when it comes to catching cheaters, they are largely alone.

"We hope [law enforcement] takes it seriously - many of the professions that are being certified are key to public welfare," said James Kendzel, the executive director of the National Organization of Competency Assurance, representing more than 330 certification-issuing groups.

With government responses lagging, testing organizations say they have been forced to fend for themselves, identifying cheaters on their own and filing lawsuits.

Susan Dorn, a lawyer in Washington who has represented nonprofit testing organizations, including the crane operators' association, told groups at the San Antonio conference that they have legal recourse under copyright law if cheaters sell exact duplicates of test answers.

However, some cheating sites have sought to shield themselves from lawsuits by calling their crib sheets "study guides" and altering the wording of questions just enough to avoid legal problems.

Nonetheless, Microsoft has filed suits against dozens of providers of study guides available on the web. In 2006, the company sued Shahzad Shahnawaz, the owner of TestKing.com, along with his Swedish web designer and 17 John Does for allegedly conspiring to steal its intellectual

property.

In a settlement this year, TestKing.com agreed to stop selling Microsoft exams. But the site still offers a full range of test content from companies such as Cisco and Novell on its main site and 80 other clone sites with similar names.

Shahnawaz did not respond to e-mails asking for comment. Meanwhile, dozens of other websites have stepped in to fill the demand for answers to Microsoft exams. Microsoft officials declined to comment on whether they plan additional lawsuits, but the company said in a statement, "Microsoft takes any and all violations of the rules . . . very seriously."

The financial consequences of cheating can be significant. Test administration officials said writing a scientifically rigorous test costs up to $1,000 per question. Microsoft, in court documents, said that each compromised exam had cost the company about $100,000.

Hoping to avoid the disruption and cost of compromised exam programs, testing groups have turned to security firms to monitor the Internet for stolen content. Some dispatch undercover officers to take tests at sites suspected of having lax security. The physical therapists' association, for example, spends about $50,000 per year on such measures, Lane said.

In some cases, however, increased security has clashed with the desire by exam sponsors to have their test available as widely as possible. Technology companies in particular have accepted lower levels of security in order to have testing centers in distant corners of the globe.

Other groups, including the Army, have moved to administer their tests online, an approach that raises its own set of security concerns. Online testing proponents insist that having people take the tests on home computers can be efficient and reliably free of cheating, but organizations must be willing to pay for special types of programs to thwart cheaters.

"If you want the convenience and lower costs that the Internet provides you for testing, you have to up the ante on security," said David Foster, who runs an online testing firm called Kryterion. "It's a tradeoff."

Foster's company promotes such advanced security mechanisms as web-cam proctoring, software that locks down the user's computer during an exam, and a program that monitors keystroke patterns to authenticate the test taker's identity.

None of these measures was used by the Army.

"The [cheating] problem has gotten bigger," Foster said. "People are more willing to do it, not feeling as bad about it, willing to justify it. All that means is, we need to do a better job." ∎