For as long as there have been exams, there has been cheating on exams. Online exams are no different, although they do provide some challenges that set them apart from traditional face-to-face exams. These include a heightened opportunity to collaborate with others, greater possibility of using unapproved resources, and an increased likelihood that someone other than the student is taking the test.

These problems are not insignificant and do not have easy answers. In spite of these very real challenges, we still wanted to offer online exams to our students because they present a number of important benefits. These include quicker and more accurate grading, more time to spend in class covering important topics, and faster feedback for the students. We decided that we needed to take steps to identify and prevent cheating on our exams and we will share some of our experiences in this paper.

Who we are, what we do

We teach undergraduate business courses at a regional campus of Indiana University. All our classes meet face-to-face for three hours a week, but we administer our exams online outside of normal class time. Our exams are both multiple choice and true/false in nature, and the students take three of them throughout the semester.

On our syllabus, we describe the nature of our online exams and also list a testing protocol. During our first class meeting, we go over the protocol in detail. We also include a section of the protocol on every exam. In part, it reads, “This is not an open-book or open-notes exam. This exam is to be taken during the allotted time period without the aid of books, notes, or other students. You have approximately 45 seconds per question to complete this exam. This exam must be taken online from start to finish. Do not download the test to take it or distribute it to anyone. The statistics feature...will monitor and report how you take this exam.”

These guidelines ensure that our students know exactly what is expected of them. In essence, they...
‘Entrepreneurial’ Qualities Help Online Learners Succeed

The distance student faces problems with persistence, motivation, and integration into academic life that most traditional students don’t even think about. To persist and succeed in this environment takes a certain set of “entrepreneurial” qualities, says Connie Reimers-Hild, University of Nebraska-Lincoln Extension educator.

In researching why some students succeed as distance learners while other do not, Reimers-Hild found a link between the traits that are thought of as entrepreneurial and successful distance students, and she began to empirically test some of her observations.

Three characteristics stood out in her initial literature review as traits associated with the entrepreneurial learner: internal locus of control, need for achievement, and risk-taking propensity. The entrepreneurial learners would have an internal locus of control, meaning that their sense of control over events and direction was located within them rather than in external factors such as luck, fate, chance, or “powerful others.” High need for achievement is a characteristic of a self-motivated personality, one that calculates risks.

According to Reimers-Hild, does not imply someone with a reckless disregard of circumstances but rather one who is willing to take calculated risks, and invest personal resources—time and effort—into projects whose outcomes are less than certain.

Having identified the traits that tend to make entrepreneurial personalities successful, she was faced with a larger question—that of motivation. That successful students tended to have these identifiable traits was one fact. But what made them choose to apply them, and apply them in this specific way? So she examined the literature to identify the most common reasons that people were enrolling in distance courses. These she identified as “personal fulfillment,” “career advancement,” and “pleasing someone other than myself.”

“Personal fulfillment really seems to be a key for these students, in terms of that’s their motivation to go back to school. It really influences their persistence,” Reimers-Hild says. “So we really need to find why are they coming to school—how does it fulfill them personally and how can we keep that going throughout their program?”

Reimers-Hild maintains that her research shows that you can help develop entrepreneurial traits in students—that students can become entrepreneurial, even if they didn’t start that way. Students can be trained to develop more of an internal locus of control. They can be helped to increase their need for achievement and taught to take calculated risks.

“We can conduct some sort of entrance counseling, for example, and really talk to the students about why they’re coming back to school and how we can best help them. really give them that personalized advising. Even now with distance learners having e-advising centers that are available on a 24/7 basis, we can still offer advising so that they will know exactly what to expect and how things can work for them and really have a custom—

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define for all involved what is and is not considered cheating on our exams.

The importance of courseware

Our first suggestion for helping would-be online exam administrators detect cheating is to use proprietary courseware. We use a proprietary system called Oncourse, but other commercially available products such as Blackboard and WebCT are very similar.

Courseware packages are valuable in many ways. To begin, they can be used to password-protect the exam. This helps reduce the possibility that unauthorized people will access the exam. Courseware also tracks the exact time the exam was started and finished. It also can log IP addresses that can be used to trace the location from which the exam was completed.

Taken together, this information can help an instructor find cases where students may have collaborated on the exam. If two or more students take the exam at or about the same time from computer terminals in proximity (as indicated by the IP addresses), there is a possibility that cheating has occurred, and we pursue these cases further.

Sometimes there is a perfectly innocent explanation for this. Other times, it becomes evident that cheating has occurred. However, because “cheating” is such a charged word and can be difficult to prove, we avoid accusing students of it. Instead, we try to document the fact that our exam protocol has been violated. One of our protocol stipulations is that students not take the exam in the same room at the same time. If we can document that this occurred, we do not accuse the students of cheating. Instead, we simply tell them that the protocol has been violated and that we will not accept the results of their exam.

Courseware also helps make sure timing protocols are not violated. We make our exams available to students only during very narrow time windows. This helps lessen their opportunity to recruit others to help them take the exam. Courseware blocks access to the exam before it is scheduled to begin and restricts access to it after the deadline.

Courseware also keeps track of the total amount of time students spend taking the exam. We have found that giving students an unlimited amount of time to complete the exam creates more potential for collaborating with others or for bringing in material that is not approved. Courseware puts a strict timer on the exam.

If a student has not finished the exam within the allotted time, courseware simply submits to us the student’s progress to that point. For our exams, we have found that allowing students 45 seconds per question gives them enough time to think about and answer each question while not providing so much time that they are tempted to violate our testing protocol.

Test design matters

While courseware is a valuable tool in the fight against cheating, a poorly designed test can limit its effectiveness. Over the years, we have found that there are ways to structure a test that help cut back on cheating.

One strategy is to scramble all the test questions for each student. Courseware also does this for us. In addition, we are able to create a large database of potential questions and then let Oncourse randomly select a subset of questions for each student. It makes it very difficult for students to collaborate when each student’s test is markedly different from everyone else’s in the class.

We also prefer to ask application-based questions as opposed to asking students to just recite facts from the text. Application questions require that students not only know the basic material, but that they also know it well enough to apply it to practical situations. This helps reduce the benefits of using unapproved materials on our exams.

Course design can help as well

The final tool we use to minimize the impact of cheating is our course design. In addition to the three exams we have students take online, we also have them complete nearly 20 graded pretests. Requiring that more than 20 assignments be completed online makes it more difficult for students to recruit others to help them. It either gets very time-consuming or very expensive for them.

We also require a cumulative final exam that is heavily weighted and is administered face-to-face. Because the cumulative final is worth so many points, students must know the material if they hope to successfully complete our course. If they have had someone else take the exams for them over the course of the semester, they will pay for it when taking the final.

Fortunately, we have run statistical analyses that suggest a very strong correlation between performance on the online exams and performance on the face-to-face cumulative final. This suggests that we have had success with our efforts to detect and limit cheating in our classes. We plan to continue to employ these methods in the future.

Still, since no strategies will totally eliminate cheating on exams, we are always looking for new and improved ways to be even more effective. And we welcome any suggestions or comments that the readers of this article might have for us.

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(Not) Making it Hard(er) to Learn, Part 1

By Patti Shank, PhD, CPT

Most things in life have built-in frustrations. For example, shopping at a grocery store during its busiest time and waiting in line to check out feels like a waste of time. Grocery stores have implemented self-service checkouts and special cashier-checkout lines for people with few items (who always seem to have far more than the allotted number of items) in order to reduce customer frustrations, but some frustrations can only be minimized, not eliminated.

There are common but inevitable frustrations for online learners. The tools have a learning curve, and updated versions and new tools require additional efforts. Waiting for communication (responses to a question, work from another learner on a collaborative project, feedback on an assignment, etc.) is often frustrating. Because the online learning experience is by its nature frustrating, we should try to take as much unnecessary frustration as possible out of the experience, because too much frustration leads to reduced satisfaction and learning; angry and frustrated learners; and attrition.

In this article, I’ll discuss practices that help online learners, especially those who are new to online learning, to determine if they are good candidates for online courses in general and your online courses in particular.

Does the student have adequate computer and computer skills?

You’ve probably had learners in your online courses who have asked you basic computer questions like, “How do I open an attachment?” or complained that they couldn’t access multimedia files. And if you’re anything like me, you wondered why someone without an updated computer system and basic computer skills would attempt to take an online course.

Institutions that enroll new online learners who have outdated computers, dial-up Internet connections, and subpar computer and Internet skills should consider the consequences ahead of time or they will be dealing with the consequences, including frustrated and angry learners and greater-than-expected attrition, down the road.

Some institutions provide minimum computer hardware, software, and connection requirements as well as assessments to help prospective online learners measure the adequacy of their computer and Internet skills. For example, Pennsylvania College of Technology has a detailed listing of requisite computer and Internet skills (http://penncollege.edu/advise/CSC110/csc/selfassessment.htm). Some offer complex assessments to analyze whether prospective learners have adequate skills. For example, ETS offers an Information and Communication Technology Literacy test (www.ets.org) that uses realistic computer and Internet tasks to measure critical thinking and technical skills.

Is online learning a good fit?

We also need to help prospective online learners determine if online learning is a good fit for them so they can self-select into or out of an online course or program. Self-assessment tools such as The Illinois Online Network’s Self-Evaluation for Prospective Online Students (www.ion.uillinois.edu/resources/tutorials/pedagogy/selfEval.asp) and Washington Community and Technical College’s Is Online Learning for Me? quiz (www.waol.org/getstarted/IsOnline4Me.asp) can help prospective online learners consider whether they will be happy and successful online learners.

Some higher education institutions offer a “get me ready to be a successful online learner” course that is taken before other online courses (if needed…no need to frustrate those with adequate skills). This type of course typically has plenty of personal hand-holding and practice doing things that successful online learners need to be able to do, such as uploading and downloading files, using discussion forums, and evaluating the credibility of online resources.

Another option for helping new online learners is an online orientation. Regis University has a humorous and helpful online orientation (http://support.regis.edu/GTDL/Regis_eTutorial.html), which is one of the best I’ve seen. It includes lessons that help new online learners discover how to get into their online courses; find and use the course syllabus and other course resources; use the course management system; complete and submit course assignments; and communicate with the instructor and other learners. My colleague Maureen Henemann, an instructional designer with Regis, helped design this orientation, and it’s a great example of creative design that serves an important need.

Clear expectations?

Online courses are just as different from each other as classroom-based courses, but some online learners make assumptions Continued on page 8 >>
Virtual Sections: A Creative Strategy for Managing Large Online Classes

By Lisa Panagopoulos, MS CE

When there are more than 25 students who regularly participate in an online course, the discussion boards and chat rooms can become overwhelming for students and difficult to manage for the instructor. Weekly chat rooms become crowded, which makes it difficult for everyone in the chat room to keep up. Weekly discussion boards become populated with so many postings that students and faculty feel inundated with the amount of information to read through and/or reply to. While the discussion and chat tools are critical to successful online courses, creative strategies need to be identified to help manage large online classes.

In a recent semester I found myself with 40 students in my Introduction to Information Systems Course. As a way to avoid having my students possibly feel overwhelmed and inundated in my course, I came up with a simple solution to managing the challenge of such a large course—I created virtual sections. The “virtual section” is a way to achieve all the benefits of a smaller class within a large class.

To create my virtual sections I used a feature available in most course management tools that allows the instructor to split the class into multiple groups. Rather than splitting the class with the intent of having the students work in “teams,” which is often the rationale for grouping students, I split the class with the intent of grouping students into multiple sections for the purposes of chat and discussion only.

Here’s how I set up my virtual section. With my class size of 40, I split the class into two separate groups. Students with last names ending in A–K were placed into Group 1, and those with last names ending in L–Z were placed in Group 2. For each week of the course, I set up a separate set of discussion boards for Group 1 and another set for Group 2. The groups also had their own set of weekly chat rooms as well. Approximately 20 students were placed into each group, which is what created the two “virtual sections” within my single course.

When splitting online classes into groups for the purpose of more manageable interaction, only the chat and discussion components are affected. This is good news for the instructor. E-mail, lecture notes, assignments, assessments, and all other course components are visible to the entire class. No additional modifications were made in order to keep track of the “groups” for any other component of my online course.

Incorporating virtual sections into my online course came with some minor added responsibilities that needed to be addressed. Once the course had started, it was important that I was aware of any students who were added late to the course. These students needed to be quickly placed into one of the groups, so that they would have access to a discussion board and chat room. Also, by splitting my class into two groups, I was responsible for conducting two chats per week, rather than just one.

With that said, I feel that the commitment I have invested into creating the virtual sections has been well worth it. I have noticed that when students were a part of a smaller class, the overall quality of the interaction within the course improved immensely. The result has been more meaningful interaction that is more manageable for all involved.

Lisa Panagopoulos is an instructor at the University of Massachusetts Lowell in the IT department. She teaches computer-related courses both online and on campus. She also teaches the “Introduction to Online Teaching Strategies” course to instructors as part of the UMass Lowell Online Teaching Institute.
To Upgrade or Not to Upgrade?

By Errol Craig Sull

There comes a time for anyone who teaches online when a computer upgrade must be made. Sometimes, an upgrade can’t be avoided: Microsoft just came out with its new Windows operating system, Vista, and after three years Microsoft XP will be no more, so if you are a Windows person you’ll have little choice but to switch over to Vista. Other times, upgrades offer enhanced features or new features or easier features—and this is what might be sought. Still again, you might be using software or an operating system that is so outdated it offers information or technical approaches that are simply unworkable.

With so many new software, hardware, and operating systems releases coming out, especially those that impact many, if not all, who teach, it’s important to know what to consider before you hand over your credit card for that newer piece of computer technology. Consider the following to make a wiser decision:

1. **Upgrade not for your heart but for your head.** If you are considering an upgrade only to get the newest whistles and bells, don’t do it—you’ll be spending your money on window dressings only. Think about how the upgrade will be of help to you (you can always find product points of new releases online), and compare that help against the price of the upgrade. Bottom line: the primary reason to upgrade is to make your job as an online instructor more efficient, better organized, and—overall—easier.

2. **Be careful of first releases.** The companies that manufacture the software, hardware, and operating systems want to sell them, of course, and computer-related marketing is very big and its advertising is highly attractive. But history has shown that first releases of upgrades often run into unanticipated problems, and so you’ll find a growing number of patches made available to fix these problems; warnings and directives about possible difficulties; and—of great value—online reviews and articles by folks who have purchased these first releases and now want to share their experiences with the Internet community. Sometimes, purchasing a first release of an upgrade can’t be avoided—just be aware of the possible hiccups that can come with these.

3. **Allow time to play around with the upgrade.** The best time to install an upgrade is when you have a relatively quiet period in terms of your online teaching responsibilities; this allows you the extra hours it will take to get totally comfortable with the upgrade. You may find that special discounts or pricing make now a good time to purchase the upgrade but that what you are currently using will serve just fine until your time is free enough to experiment and become best buddies with your upgrade.

4. **Buy a guidebook.** I’m very adept with and comfortable around computers, yet I’m also a big believer in using a guidebook to give me a more thorough, faster, and focused look at my upgrades (and new software as well). Poring through the nooks and crannies of these books over the years, I’ve discovered features and shortcuts I never knew existed, and these have made the programs quicker to master, saved me time, and made my teaching more efficient. Also, do regular online reads of chat rooms, Listservs, and reviews that feature your upgrades, as well as computer columns that might run in local newspapers.

5. **Cost does enter into an upgrade decision.** There’s a rule of thumb: upgrade when the cost of not upgrading exceeds the cost of upgrading. When you seem to run into more and more difficulties in terms of time, efficiency, and productivity with an older software, hardware, or operating system, it is definitely time to upgrade, price be damned. You have chosen a profession that depends on the computer, and thus you must have it work for you, not against you. (TIP: If you use a computer on a school campus, find out if the school will be upgrading to a newer version of a program used by all on campus; if yes, this will save you from having to purchase one, unless you’d also like the upgrade for your home computer.)

6. **Know the difference between an update and an upgrade.** These terms are often confused; so that you are clear on each, remember that an update (also called a patch) is a free “fix-it” that the product manufacturer makes available online to correct discovered problems with the product, while the upgrade is not free, it is a new version of a same product (Microsoft Office 2007, for example, is an upgrade of Office 2003), and can be purchased online or in a store.

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TIP: Always be on the lookout for patches that are released (by registering your product online you will usually be automatically informed of any patch releases; you can also check the manufacturer’s website).

7. Look for peripheral software that might be helpful for your course. While this is not an upgrade to a piece of software you already have, I consider it an upgrade to my overall quality as an online instructor. Again and again, I have come across software programs that are not crucial to the courses I’m teaching but prove very helpful to me in various aspects of the courses—sometimes to benefit me, sometimes to benefit students, sometimes both. The more “tools” you have at your ready to help you teach your course, the better the experience for you AND your students.

This column is not about recommending computer software, hardware, or operating systems, but Microsoft’s Office is so pervasive in its use by online instructors—especially Microsoft Word—that I feel it’s important to share my experience. I’ve been using Microsoft Word 2007 for about two weeks, and it is a big improvement over Word 2003. More comprehensive in what it offers yet easier to operate in many of the areas I’ve thus far explored, it has saved me time, made my teaching efforts more productive, and given me a more efficient approach to my courses. Word 2007 gives the impression that Microsoft consulted with online teachers in developing it.

9. Be certain that your intended upgrade will run your school’s programs. As mentioned, Microsoft just released Vista, its replacement for Windows. Yet it turns out that some course management platforms may not be supported by Vista, at least not until later in the year. This could result in an instructor suddenly having no access to his or her courses, obviously a serious problem. So before you upgrade, be certain there will be a smooth transition from current to new.

REMEMBER: Folks will trust God without hesitation—but all computer upgrades need first be inspected, dissected, and disinfected before installation.

Please let me hear from you, including sending along suggestions and information for future columns. You can always reach me at errolcraigsull@aol.com. With each of my columns, including this one, I offer a sampling of whatever subject I’ve discussed; for this column, if you’d like a list of the software I’ve found most helpful, just send me an email!

Errol Craig Sull has been teaching online courses for more than 12 years and has earned a national reputation through his writing and workshops on the subject. He is currently putting the finishing touches on his next book—a collection of his online teaching activities, titled Pebbles: A Most Unusual Approach to Very Effective Writing.
Why Do Students Take Online Courses?

Increasingly, students are able to decide whether they will take a course online or in the traditional classroom setting. Robinson and Doverspike (reference below) were interested in why a student might choose one of those environments over the other. Obviously, their results are of special interest to those who advocate online learning and can be of use to those who design online learning experiences.

Students in this sample—mostly women, mostly in the traditional 18-23-year-old category, and all psychology majors—completed a questionnaire that included a description of a fictitious experimental psychology course to be offered online. Students were asked about the likelihood of their taking this proposed course as well as questions about general attitudes toward online courses, whether they thought they might learn more in these courses, whether those close to them would approve of them taking an online course, and whether being busy might make them more likely to take an online course.

As for the likelihood of these students enrolling in an online course, the sample was relatively neutral: 4.38 on a 7-point scale, with 7 being “extremely likely.” Researchers attribute this result to the fact that students are familiar and comfortable with traditional classroom settings. However, they did find responses to four questions predictive of a student’s intention to take an online course. Students’ intentions to take these courses were highest when they believed that by taking an online course they would “have a better chance of getting a good grade, learning more, and making progress toward the completion of my major.” (p. 67) These students’ intentions were also highest when they reported they would take an online course if they were too busy and did not have time for a traditional course.

Students in this sample did hold some negative attitudes toward some aspects of online courses. “For example, students believed online courses would hinder faculty interaction and … this interaction is vital to learning.” (p. 66) These researchers cite other findings that challenge this belief—some reporting that students in online courses actually felt more connected to their faculty members. They also describe the various ways faculty can connect with students electronically, such as online office hours, instant messaging programs, Listservs, and electronic bulletin boards.


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that can lead to unnecessary frustration. When learners know in advance how the course works, they can make informed decisions about enrolling. For example, one of my online courses involved numerous small deliverables each week and lots of group work. It wasn’t a good fit for learners who needed to travel for a living or be out of touch for a few weeks during the semester, because the course process was fairly inflexible. Contrast that with another online course in the program that was flexible and primarily self-paced.

Some instructors don’t provide adequate detail about course expectations to prospective learners because they need a certain number of learners to enroll. This is a case of “pay me now or pay me later,” because learners who aren’t able to be successful quickly become problems (or worse). Consider adding a list of course realities and expectations to course descriptions so prospective learners can determine before enrolling if they are likely to be able to meet them.

Frustrations for learners commonly turn into frustrations for instructors and higher education institutions. Considering how to reduce unnecessary frustrations and help new online learners succeed, therefore, makes both sense and cents. Consider how you, your department, and your institution can use computer hardware, software, and access requirements; preadmission assessments; “how to be a successful online learner” lessons; and detailed course expectations to help online learners succeed.

Patti Shank, PhD, CPT, is a widely recognized instructional designer and instructional technologist, writer, and author who builds and helps others build good online and blended courses and facilitate learning. She can be reached through her website, www.learningpeaks.com.
How to prevent online exam cheating with online proctoring. Automate live proctoring is the way forward when it comes to preventing cheating with wearable devices. Proctortrack’s proctoring technology detects and records any suspicious changes in a student’s physical behavior. With adequate technical competence, students these days can easily cheat on online exams. Most online assessments are hosted on open-source systems that are vulnerable to hacking. With a virtual machine and some insider help, anyone can take control of a student’s computer and impersonate them from a remote location. Lately, a string of incidents surfaced where online exam papers for technical and non-technical posts were rigged. No tips that involve karma or awards. No tips that are just clever ways of stealing from other people for the sake of stealing. No meta tips. No tips about other Reddit posts, especially other ULPT tips.

I started an online class a couple weeks ago and I didn’t realize that the exams were proctored (meaning someone watches you through your webcam and makes sure you’re not cheating). I kinda freaked out when I found this out because I didn’t take the class seriously at all. They make you share your screen and they also monitor the processes on your computer so virtual machines and extra monitors were not an option. However, after some research, I was successfully able to cheat on the test. It’s hilarious to think these companies can prevent cheating. 82 comments. share. The following are some practical tips to prevent or reduce cheating for two common learning assessment activities, namely testing and homework assignments. Tips for Testing. Purposefully Select Assessment Methods. Use online testing, particularly objective test (i.e., multiple choice, multiple answer, true/false) for lower stakes assessment of student learning. In assessing student mastery of course goals and objectives, objective tests should be only one option considered among a spectrum of methods considered.