

Designing Online Courses to Discourage Dishonesty

Incorporate a multilayered approach to promote honest student learning

By **Barbara Christe**

One of the first questions asked of most Web-based educators is, How do you test the students? Following this question is, How do you know the students are learning anything? For instructors who are focused on content and its presentation, these questions address a facet of course design that might not have been specifically incorporated into their preparation. I will present techniques used at Indiana University–Purdue University Indianapolis within the Electrical and Computer Engineering Technology department. The department has offered seven distance education courses 42 times since 1998.

Academic Dishonesty

Regardless of the format, instructors desire to offer a valid, reputable class. With that focus, instructors hope to reduce or eliminate activities that circumvent course guidelines. Whitley and Keith-Spiegel described types of dishonesty, including cheating on tests, plagiarism, facilitation, misrepresentation, failure to work as part of a group, and sabotage.¹ This list applies to coursework presented in any format. In general, faculty are concerned about course participants and their collaboration with other students, participants' use of forbidden resources, and students' inappropriate assessment activities.²

The activities described might be encouraged under different circumstances. For example, someone who seeks a unique solution, exploring all resources,

might be described as employing "creative problem solving." In the classroom, however, such a solution might not be within the confines of the assignment as an instructor has designed it.

In another case, students who work together to meet a deadline might be described in the workplace as possessing the ability to "produce under pressure." Self-reported success, teamwork, and using the tactical advantage could describe actions that earn praise in the workplace—not in the classroom. The point of this comparison is to show the variations between the classroom and workplace. For students who are in the workplace, accustomed to teamwork and group activities, the acceptability of working together, for example, might be assumed.

Student behavior in a traditional classroom is relatively well-defined. Even a new college student can adapt to instructor expectations by modeling other students in the classroom. In the distance classroom, expectations are not as obvious unless the instructor takes strides to explicitly state them. Appropriate student behavior must be identified and described. What is appropriate and necessary for a student's employment is not acceptable in the virtual classroom. That said, some faculty do not recognize or explore the differences between their classroom and the workplace. An understanding of the misalignment of these two environments is essential to successfully manage the virtual classroom.

As Whitley and Keith-Spiegel have

described, most universities rightly insist that a class provided in a distance-education format be fundamentally equivalent to a traditionally provided one. Faculty desire to transfer knowledge to students. The reputations of the faculty member and students are at stake. In addition, the morale of the classroom is on the line. Students in the class must feel that others are working in an honest and legitimate way.³

Understanding why students may be dishonest is important to a faculty member who must communicate expectations and monitor behavior. Cizek identifies student excuses and rationalizations for dishonest behavior.⁴ Common justifications include

- Easy to do
- No time to study—the student is employed
- A friend/coworker needed help
- Student must pass the class
- Everyone else is cheating
- "No one cares if I cheat"
- Sabotage—"my file was stolen"
- Course is too hard/teacher is unfair
- Course information is useless

All faculty need to be aware of these explanations for inappropriate behavior. It is even more critical for distance-classroom faculty who must plan for these excuses and refute them in communication with students.

Fundamentally, the problems and their causes are exactly the same for the traditional classroom as for the distance-education classroom. For example, most faculty are well-equipped to look for cheat notes during an exam or question a stu-

dent with a flimsy excuse. In the nontraditional classroom environment, new workaround techniques can leave faculty off-guard or unprepared.

This article presents ideas that enable instructors and course designers to learn new techniques, strategies, and skills for monitoring student activity to ensure a valid virtual classroom. The consequences of ignoring potential avenues for student dishonesty in the virtual classroom are serious.

Course Design Focus Areas

In my experience, five general areas of a distance-education classroom require attention to encourage student honesty:

- Syllabus
- Content presentation
- Student/instructor relationship
- Assessment design
- Monitoring

It is important to revisit each area every semester for adjustment, clarification, and changes. Doing so will prevent a carbon copy of a course being presented to the next group of students.

Syllabus Design

Many excellent works have been prepared to assist faculty in effective syllabus design. A good and complete syllabus designed for a traditional classroom is still essential in a distance-learning delivery format. The virtual classroom, however, requires specific attention in 10 additional areas.

■ *Craft course objectives carefully.* Identify not only the specific topic to be mastered but also the level of assessment required. Use Bloom's taxonomy to communicate to students what level of mastery is expected, from rote repetition to interpretation. If faculty define clearly their expectations of students, students will better be able to meet them.

For example, I deliver a unique course that teaches hospital equipment technicians the tools necessary to communicate in the workplace. The course objectives explain what information must be "memorized." In addition, students are told what content they are expected to learn at a higher level. In this case, students are not expected to mem-

orize all of the cranial nerves; however, they are expected to be able to read a scenario filled with technical terms and produce a brief summary.

■ *Identify behavioral objectives.* Instructors should list the behaviors necessary for success in the class. This section should include objectives that address time spent in the classroom and student activity within the course.⁵

■ *Define academically inappropriate behavior.*

It is essential to identify unacceptable activities. For example, not all students realize that sharing a computer file with another student, who then turns in the assignment, is *facilitation* and not acceptable for either student.

Provide descriptions of how tests should be taken and assignments completed, as well as how not to perform them. Some instructors assume that describing cheating scenarios will encourage students to try them; however, this has not been my experience. Consider the following situation from one of my first classes: Two students completed an online exam together using cell phones to communicate during the exam. While the method was not initially obvious to me, the students had clearly worked on the exam together. Questions were submitted in the same order, and answers were changed within seconds of each other. When confronted with this evidence, the students claimed innocence because cell phone use was not expressly forbidden. As a result, my syllabus is far more detailed, and similar student collaboration has not occurred again.

■ *Identify institutional policies for dishonest behavior.*

Expulsion! Failing grade! Many students are shocked to learn of the penalties instructors can impose on students for violating course rules. Many universities have placed their academic handbooks online. Instructors should link to the appropriate sections of the handbook to point students to the relevant sections.⁶

■ *Identify reasons to be honest.* Discuss the importance of life-long

learning and working to a student's personal best. Explain the expectations of an employer once the class is completed—the knowledge or expertise that is expected of a student entering the workplace. It also might be useful to discuss other situations where honesty is important. For example, a student's employer, children, spouse, or parent might also expect valid and accurate performance in the class.

■ *Discuss the relevance of the course material.*

Perhaps the greatest hurdle for students is their inability to see what the class can offer them. What is the long-term value in learning the material? Why should they care? If possible, point out how the course material may be helpful on the job or in future classes in their major. Fundamentals can be mundane and seemingly useless. Try to briefly outline the value of the course content. Reference national examinations or other opportunities that may arise in the future that will draw on students' experiences in the class.

For example, my students work in the hospital environment, where their ability to communicate with staff is critical. This concept is reinforced within the course content. Students are reminded that, when one-on-one with a surgeon in an operating room, books and the Internet won't be available to help them!

■ *Describe monitoring/technology tools available to ensure compliance with course guidelines.*

Explain what tracking tools and other "big brother" statistics are available to monitor activity within a course. Use of these tools is essential, which requires that faculty investigate their courseware's capabilities. For example, I follow student activity in the classroom, watching frequency and duration. Students are sent messages when they do not meet the course guidelines. These messages function both to keep students "on track" and to remind them that I am observing their activities.

■ *Assess student preparedness to begin the class.*

These include computer hardware and

software abilities, academic skills (from previous coursework), and the time commitment expected. It may be necessary to create a quiz that asks simple questions to accurately assess students' computer abilities. For example, many students will say they have adequate e-mail skills but cannot send an attachment. As another example, I received a blank CD from a student who did not know that her CD drive could not burn CDs; she assumed she had completed the assignment on time. At the beginning of the semester I employ an ungraded quiz to assess students' hardware and software capabilities.

■ *Establish deadlines.*

It is essential to set milestones throughout a course to promote instructor assessment and to assist student progression through the class. Be extremely clear, and include date and time. Also, be aware of time zone issues and daylight savings changes. I have had difficulty with 12:00 a.m. deadlines (midnight), since some students confuse 12:00 a.m. with 12:00 p.m. Using an exact time such as 11:58 p.m. is recommended.

■ *Explain what procedures and consequences are in place for problems that commonly arise.*

Create policies for student Internet service provider (ISP) crashes (the new "dog ate my homework" excuses), course availability problems, power outages, late assignments, uploading blank or garbled files, and other "not my fault" issues.

Content Presentation

In a departure from the traditional classroom, how content is presented plays an important role in encouraging honest student activity. Some suggestions follow.

■ *Present the information well.*

Ko offered tremendous suggestions and guidelines.⁷ Good course development of online courses is both an art and a science. Instructors must explore the experts' advice and create a sound learning environment with well-presented

content as the foundation. Unclear content will lead students to circumvent guidelines because they may feel they have "no other choice."

■ *Learn how to use technology well but reliably!*

Do not include links, video or audio, or other supplements whose transmission is not reliable. A student who cannot get the information through the acceptable methods may feel pressured to seek alternatives. In my experience, a reliable, "low tech" presentation is preferable to a slick, "high tech" one. PowerPoint, for example, is excellent when narrated by a presenter in a group setting for certain types of concepts, but it is not an effective teaching tool in a general distance-education environment.

Content should be dynamic, using links and student prompts. And, while the graphics and colors of high tech are visually pleasing, they often lend little to reinforce the subject. Consider low-tech alternatives. Be considerate of students who use slow, dial-up Internet connections. The educational point of a link may be lost if the download time is lengthy.

■ *Tell students what is important.*

Learn to emphasize what is important using good course design. Use reinforcement techniques like self-check problems. For example, use the "try this" technique: Ask a question that reinforces a key concept, then offer a "click here" for the correct answer. Offer a second "click here" for an explanation for those who did not answer correctly. Include learning objectives for each section to direct students toward what you feel is important as an instructor.

■ *Be clear about supplemental resources used to expand a topic.*

When additional information is offered (as a resource for well-performing students), identify what, if any, of the information will be required as part of the course. Too much information can overwhelm students, and, as mentioned earlier, they may act inappropriately as a result.

Student-Instructor Relationship

Promoting an excellent relationship can diminish some dishonest student behavior. As identified earlier, student perception of faculty fairness and approachability play a role in encouraging acceptable student behavior. Some methods to support an excellent relationship follow.

■ *Do everything possible to ensure good student-instructor communication.*

Use *all* methods *all* the time, including the telephone when appropriate. Include alternative ways for students to contact you in the syllabus. Recognize that problems with one communication method may occur (power failure, for example), and alternative contact methods may be necessary.

■ *Include activities that promote inter-student communication.*

Fight student isolation! Set up message boards for both content (especially assignments) and non-content material. Do whatever it takes to get students "talking." For example, offer bonus points for a specified number of message board posts. Encourage group work. Look for creative ways to use collaboration within the class.

■ *Carefully monitor student activity or lack thereof.*

Use tracking tools. Count the number of minutes working within the class. Inform the students when you notice a change in behavior.

Assessment

Fundamental to ensuring a quality, well-delivered, successful class are good assessment tools. Carefully selected, these tools will also assure the student that cheating is not "easy," a common excuse.

■ *Vary the type of assessment tool used throughout the class.*

Explore the authoritative guide of assessment by Angelo and Cross and investigate their numerous creative techniques.⁸ Consider selecting various methods to evaluate student work. These might include research exams, multiple-choice exams, presentations, papers, policy or

position statements, and interviews with experts. Think creatively and engage other people. For example, use an industry representative (most are thrilled to be involved) to be available online for questions using a message board. Sales representatives can be an excellent resource. Recognize that the power of distance education allows for new types of interaction that might never be possible in a traditional classroom.

■ *Write questions well.*

Carefully craft exam questions or paper topics to be broad enough to limit students' ability to cheat. Write questions which cannot be looked up easily. For example, put the root of a question into an Internet search engine and see how simple it is to locate the answer. Carefully select incorrect answers for multiple choice questions. Do not generate a question that can be easily answered by a glance at the book—a bulleted item or table entry, for example. Write questions that are rooted in Bloom's taxonomy, including analysis and synthesis. Questions written to assess these skills will not be available on one page in a text book.

As part of a research exam (completed over several days of "looking" for answers) I used a test question that asked a student to identify a technique used in patient monitoring during surgery. The question, although at a low level in the Bloom taxonomy, was complex for the students because only the description was provided. Internet search engines did not readily "spit out" the correct term. (I verified this in advance.)

■ *Consider the use of honor statements.*

Develop an honor statement to be used as part of the overall course or part of each exam or assignment. The statement can be simple or complex. This may not be statistically effective, but it clearly identifies an instructor's expectations. It also makes enforcement of penalties much easier. In addition, a recent study by McCabe and Pavella showed a relationship between honor codes and a reduced level of student cheating.⁹

■ *Plan for the worst.*

Have penalties in place (either publicized

or not) for problems like ISP connectivity issues and violations of time limits. Faculty must identify the "not my fault" limit beyond which penalties occur.

■ *Assume students will have every resource available all the time.*

Regardless of any restrictions or instructions governing an assessment tool, students will likely have resources at their disposal, from a book open in one window to a Web search engine open in a second window.

■ *Use time limits as the key to good design.*

Even if students look up some portion of the questions, they cannot have enough time to look up all the questions.

■ *Monitor activity.*

Examine what time students accessed an exam and how long they took to complete an exam. Look for patterns and similarities with other students. Compare students' answers. Guard access to the exam.

■ *Create a large question bank to offer multiple versions of an exam.*

Multiple questions should be written by the instructor for each learning objective. The test should be a random collection of questions so that each student's version is unique. The resulting number of exam versions is very high. Use the power of the testing tool to limit students' ability to gain an advantage even if they see other students' exams.

■ *Consider setting a trap.*

If circumstances warrant, consider setting up a scenario that will identify students who violate course rules. For example, when an assessment tool does not allow outside assistance, develop and post a Web page that contains incorrect information relating to course content.

Monitoring Tools

"Big brother" is an essential tool to monitor student behavior. You would not pass out an exam in a classroom, leave the room, and assume no students would cheat. Similar to an instructor walking the isles during an exami-

nation to monitor students, these tools effectively monitor students in the Web-based environment.

■ *Consider using a Webcam.*

This inexpensive option allows faculty to view student activity. However, recognize the possibility of off-camera student activity that might contradict course rules.

■ *Use all statistics possible and encourage the development of additional features as needed.*

Tracking student activity is easy to do with good technical support. Seek out the programmers and explain what statistics are needed.

■ *Create a "fake" student to enroll in the class.*

One of my colleagues generates a student profile and logs in as that student to view any communication that occurs among students. In one class, a student e-mailed the answer to an assignment to all the other students. Without the "special student" profile, the instructor would not have known about this behavior.

Repeat

Each semester it is vital to revise and rework a class. It is very easy to offer the same class each semester, which allows students to carbon copy others' work. Vary assessment tools, paper topics, and class discussion points. Change the experts who visit the class. Add additional questions to the test bank.

Measuring Success

How can instructors know they have succeeded in promoting unique student work and offering a valid educational environment? Instructors have likely failed if students have earned extremely high grades, assignments are identical, and large numbers of students are hugely successful. To verify successful individual work, look for the following subtle evidence:

- Grade spread/variation—especially in comparison to traditional classrooms
- Performance in other classes that depend on this information

- Feedback from employers who rely on students to understand material
- Employer-funded enrollment in the class
- Student enrollment and success at other institutions
- Student surveys
- Performance on national certification examinations

Remember that it might be difficult to ensure student involvement and achievement on an individual level in traditional classrooms, especially large ones.

Conclusion

It is critical to put extra effort into course design. Instructors must explore the avenues students will take to misrepresent their success and put up roadblocks within the course to prevent this behavior. Instructors must establish a supportive and impartial classroom. Most important, experience will mold the best instructors. As instructors see what students try and hear their

newest and most creative excuses, they will be better able to predict and prevent such behavior. Also, instructors will be better able to react with just and creative countermeasures to keep students on track.

Be sure to use a multilayered approach to promote student honesty. Design the course well before it starts. Communicate well while the class is in session. Monitor students carefully. Lastly, rework the class after each semester. *Many things* is the short answer to what to do to ensure student honesty. As in the traditional classroom, no one-step, ideal solution will ensure integrity in the virtual classroom. *e*

Endnotes

1. B. Whitley and P. Keith-Spiegel, *Academic Dishonesty: An Educator's Guide* (Mahwah, New Jersey: Lawrence Erlbaum Associates, 2002), p. 17.
2. G. J. Cizek, *Cheating on Tests: How to Do It, Detect It, and Prevent It* (Mahwah, N.J.: Lawrence Erlbaum Associates, 1999), p. 39.
3. Whitley and Keith-Spiegel, op. cit., p. 4.
4. Cizek, op. cit., p. 35.
5. An example of behavioral objectives is available at <<http://www.iupui.edu/~cletrcse/behavioralobjectives.htm>>.
6. An example of a page referencing the IUPUI policies is available at <http://www.iupui.edu/~cletrcse/academic_dishonesty.htm>.
7. S. Ko, *Teaching Online: A Practical Guide* (Boston: Houghton Mifflin, 2001), p. 61.
8. T. Angelo and K. P. Cross, *Classroom Assessment Techniques: A Handbook for College Teachers* (San Francisco: Jossey-Bass Publishers, 1993).
9. D. McCabe and G. Pavela, "Some Good News About Academic Integrity," *Change*, September/October 2000, pp. 32–38.

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