

As online education has grown, so too, unfortunately, has the concern over academic honesty in this new environment. Academic honesty is a topic that keeps coming up over and over again in online education circles. These concerns are not new, nor are they limited to the online realm. However, when there is relative anonymity and a separation between instructor and student, these concerns seem to increase. This article attempts to critically analyze the arguments on both sides of the online cheating debate while presenting techniques for circumventing and alleviating issues related with online education.

Of all the animals, man is the only one that lies. – Mark Twain

### **Are students cheating?**

As Ford would say, all people lie (Ford, 1996), and many will cheat no matter what the context. It seems almost a rhetorical question to ask if students are cheating. Perhaps a better question would be how many students are teaching.

In high schools, the number is self-reported relatively high. McCabe (2004) found that almost 3 out of every 4 high school students admit to having cheated. A 1998 survey from Who's Who Among American High School Students showed that of 3,123 students, 80 percent admitted to cheating on an exam (Bushweller, 1999). Estimates of higher education student cheating likewise range from 70 to 85% (Kliner, 1999; Lupton, 2000; & Renard, 2000). Davis (1993) reported a test cheating rate of 40 to 70%. A survey of over 5000 students on 99 campuses by William Bowers in the 1960's showed around 50% of higher education students had cheated on exams (Hamilton, 2003). These numbers are similar to surveys by McCabe (2004) showing 23% to 45% of students self-reporting cheating on tests, 45 to 56% cheating on written work, and approximately 75% of students admitting to some form of serious cheating in a 2000/2001 survey. All of these numbers add up to one conclusion. ***If you look at the student to your left and the student to your right, odds are that one of them has, will, or wants to cheat in your class.***

The studies above were looking primarily or exclusively at face-to-face educational situations. However, when one looks at the research comparing online to face-to-face situations, the pervasiveness of cheating seems to hold steady across modalities (Grijalva, 2003). No evidence currently is found to support that a student is more likely to cheat online than face-to-face, but then with such a high rate in both, it would admittedly be hard to detect a difference.

Honesty pays, but it doesn't seem to pay enough to suit some people. - F. M. Hubbard

### Why are students cheating?

Since it seems like everyone is cheating, there must be some reason for it. Perhaps a sad epitome to our time is how easily one can find these reasons. A wide range of reasons (Figure 1) are offered by authors from a variety of perspectives (Auer, 2001; Hamilton, 2003; Harris, 2002; Kliner, 1999; Lathrop, 2000; McMurty, 2001; Renard, 2000; Rowe, 2004; Slobogin, 2002; & Stephens, 2004). It is also important to note that sometimes people cheat without even knowing it. However, several purposeful reasons are clearly shown in these quotes from student interviews in Slobogin (2002):

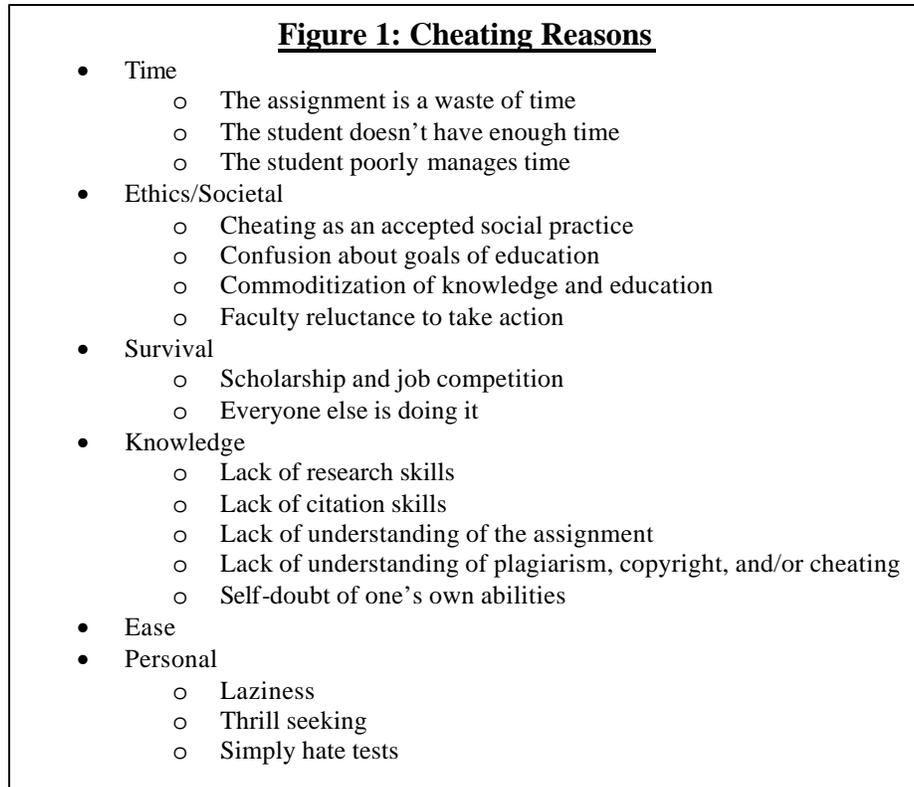
“The better grades you have, the better school you get into, the better you’re going to do in life. And if you learn to cut corners to do that, you’re going to be saving yourself time and energy. In the real world, that’s going to be going on. The better you do, that’s what shows. It’s not how moral you were in getting there.”

“We students know that the fact is we are almost completely judged on our grades. They are so important that we will sacrifice our own integrity to make a good impression.”

It all boils down to the reasons being more important than actually learning or at least showing what you have learned. We live in a society that seems to be over-accepting of this downward ethical trend where most students do not even consider copying on a test or paper content to be a serious issue if they even consider it to be cheating in the first place.

Considering the many reasons given, online education does not presumably give students a *new* reason to cheat though. The actual reasons for cheating (and perhaps not cheating) appear to be mostly the same between traditional education and online education (Hamilton, 2003; McCabe, 2004; McMurty, 2001; Renard, 2000; Rocklin, 1999; Slobogin, 2002; Stephens, 2004). So while honesty is a problem facing all modes of education, the reasons for cheating should not

be more prevalent in one medium over the other, but is there anything specific to the online education environment that might enable or encourage particular students to cheat any more or less than in a face-to-face classroom?



### **Possible effects of online education on cheating potential**

Begin by considering that the Internet is still relatively new. As such, a standard code of ethics is still evolving in this modality. With the ethical beliefs of students already in question, the online environment places them in a situation where uncertainty over the rules in this new terrain may confound the already fuzzy realm of academic honesty. This argument may be losing its weight today; however, as the Web continues to grow in use and pervasiveness, moral ethos and codes of conduct have begun to be accepted.

Next, consider time issues. A recurring sentiment in ongoing surveys of graduate-level distance students (unpublished research) shows that time-management issues are one of the primary concerns of newer online students. The discourse nature of many online courses can quickly lend itself to a student to falling behind. Pressure to catch-up might contribute to a

student cheating. With proper measures as described later in this paper, time issues can effectively be reduced so that such pressures present themselves less to the students.

This pressure may be compounded based on a student's technical competency. Online education is technology intensive, requiring some degree of knowledge of both hardware and software by the students. When an error does occur, a participant can quickly be set back without quick assistance. The end effect is an increase in any time pressure as noted above along with possible anxiety created by the technical failures. Once again though, proper design of an online course can limit such failures and anxieties.

Despite the recent success and growth of online distance education, one resistance factor to online education continues to be that many believe (whether true or not) that cheating online is simply too easy (Rowe, 2004). Interestingly, the most often cited factor in online education dealing with academic honesty is also one of its strengths, anonymity. Because of anonymity, an instructor cannot know what (or who) the students are bringing to the assessment table (Currie, 2004; Olt, 2002; & Rowe, 2004). Students may bring books, notes, and the entire Internet along with friends or even paid helpers. All online assessments essentially become open book in nature. But life itself is open book. As a result perhaps of necessity, online education can shift instruction away from the multiple choice exams and towards more authentic assessments. Knowledge can be explored in a discussion where every student has the opportunity to participate.

One conception of online education is that it provides a haven for cheaters to coalesce. Unfortunately, we know that cheating overall is increasing for all modes of delivery (Bushweller, 1999; Hamilton, 2003; Kliner, 1999; & McCabe, 2004). There is no evidence that cheating in one mode of education is increasing more than the other. Furthermore, such a theory would require a concerted movement within which a cheating community had built awareness of something special in one modality allowing cheating at a safety level different enough from traditional education to offset any costs of shifting the student's delivery preferences or needs. Such a situation is highly unlikely.

Taking these ideas in mind, one might think that students are simply bound to cheat online, but a more realistic conception about online education is that the potential for cheating online is probably no different than that in face-to-face education (Carnavale, 1999, Grijalva, 2003; & Kaczmarczyk, 2001). In fact, some anecdotal evidence suggests that students may cheat

less in online courses (Rowe, 2004). Similarly, Kaczmarczyk (2001) found that students and faculty overwhelmingly believed that it was easier to cheat through distance education, however; after having experienced online education, they were equally divided. The ease of cheating online may simply be a misconception. Furthermore, some factors within the online teaching and learning paradigm may actually reduce cheating.

We have seen that a key to successful online programs has been a shift away from traditional teaching methods towards an interactive, student-centered paradigm (Elbaum, 2002; Harasim, 1990; Ko, 2001; Palloff, 1999; & White, 2000). Successful courses develop a sense of community among the students, with everyone contributing to the learning process. A sharing, communal atmosphere may help to reduce both the desire and the need to cheat.

Also, the fact that online students are separated by distance may reduce peer-to-peer cheating from a practical standpoint. Sharing answers with other students requires more than a glance over one's shoulder. Students may be unwilling to question another student whom they do not know personally. They may fear being reported to the instructor by other students, especially in the presence of a modified honor code (CAP, nd). It can also take time to determine who the good and the bad students are when there is no prior knowledge of classmates. Students do not know who to cheat from in the beginning, and by the time that they do know, they have already worked hard enough to keep up and complete previous assignment that they may no longer feel an academic need to cheat in the rest of the course.

One self-imposed factor that may reduce cheating online has been the push for the 'ideal' online student. Numerous successful online student surveys exist where prospective students are able to check their readiness or success prediction in an online classroom (ION, 2005). By using such quizzes, some students not fitting the mold of independent, self-directed, and technological adept individuals may refrain from taking an online course. The learning technologies themselves may be attracting or limiting enrollment to a more savvy and motivated student to begin with. In such a way, a potential need or cause for cheating has been removed from the scenario.

Course selection may also be currently reducing cheating rates online. Currently, most online programs are targeted more for professional and graduate level education. Other undergraduate and K12 programs have focused initially on upper-level students or conversely, those with special needs. I offer this thought just as an aside, for I know of no empirical

evidence to suggest that such a group would cheat more or less than others, but do argue that in the case of graduate education, students tend to be in their courses out of interest and are generally at a level of practical community involvement and knowledge that would seem to reduce the need to cheat. Students may be more motivated and more involved with the learning process such that participation and learning can outweigh academic honesty issues for the students.

Finally, our belief of rampant Internet cheating may be overblown. McCabe found that the likelihood of plagiarizing from the Internet is actually only self reported at 10% with high school and higher education students (CAP, nd). Such cheating can occur in both the face-to-face and online classrooms. The likelihood of students using the Internet for assignment completion or other cheating is no different in online courses than in face-to-face courses for any assignment that students may complete on their own time (Grijalva, 2003).

Integrity -- When you do the right thing even though no one is watching. -- Anon

### **Discouraging and preventing cheating (or encouraging honesty)**

As the saying goes, an ounce of prevention is worth a pound of cure. Independent of how easy or hard it is to cheat and the level at which that cheating may be occurring, it is still prudent to take action in order to increase the possibility of academic honesty among one's students. There are many techniques for decreasing cheating in an online course, some of which have been alluded to already. The place to start is to acknowledge that it is a possibility that must be addressed. We then want to reduce it as much as possible since, promoting integrity is more effective than policing it. Figure 2 outlines the methods discussed below.

The first measure of honesty preservation in an online course (and perhaps any course) is through educating the students about cheating and plagiarism issues. For instance, sometimes students cheat without even realizing or thinking that what they are doing is wrong. Kliner and Lord (1999) saw that 50% of students did not even feel cheating was wrong. Renard (2000) defines the unintentional cheater as one who has never learned how to properly use and document resources. This problem can be exacerbated in an online course. Many students and even instructors are unfamiliar with online ownership issues or what is right and wrong (Kliner, 1999; McCabe, 2004; Slobogin, 2002; & Stephens, 2004)). To allow them to become familiar with these issues, students need to first be taught that copying from the Web is wrong. They also

## Figure 2: Preventing Cheating – Promoting Honesty

(Carnavale, 1999; Cole, 2000; Currie, 2004; Davis, 1993; Gray, 1998; Harris, 2002; Leland, nd; McCabe, 2004; McKenzie, 1998; McMurty, 2001; McNett, 2002; Olt, 2002; Renard, 2000; Rocklin, 1999; Rowe, 2004; & Stephens, 2004)

### Educate Students

- What constitutes cheating (define all terms)
- How to cite sources and use library resources
- Provide clear policies perhaps with learning contract
- Orientation program within which students become informed
- Give them images of people who don't cut corners such as scientists, business people, etc.
- Let them know that you are against cheating and will carry out policies
- Let them know that you know about paper mills and other cheating sources

### Support Students

- Provide technical support
- Provide workshops on library research, etc. (institutional level)

### Community

- Build supportive scholarly atmosphere in your online course
- Get to know the students (even with phone if necessary)
- Utilize collaborative projects and discussion in assessments with high levels of interaction
- Make use of an honor code system
- Exemplify integrity yourself

### General Pedagogy

- Capture the student's attention, make it relevant
- Help students understand value of what they are learning
- Create assignments specific to each student and their interests/expertise, perhaps relating answer to their own experiences
- Make assignments contingent upon earlier course content
- Provide example work and clear instructions
- Provide enough time to do assignments but not so much time that they can easily get help
- Use formative assessments
- Have students provide journals, reflections, or keys of learning
- Debrief students or use meta-learning exercises
- Make difficult assessments low stakes (take more than once, break into many small parts taken individually, etc.)
- Life is open book
- Alternative assessments such as presentations, synchronous activities, discussion, etc. when appropriate.
- Do not limit to just one form of assessment throughout the course.
- Update curriculum and assessments each term
- Make sure assessment is in line with learning and course objectives
- Emphasize essential questions that touch upon issues important to students
- Stress and reward originality

### Quizzing and Testing

- Open book
- Proctor
- Use test banks
- Randomize numerical values
- Create questions in many formats such as constructed response formats (may prohibit automatic grading)
- Provide practice exams
- IP constraints on computers accessing assessment
- Log-in systems with specific time settings.
- Video or text-conferencing synchronous exams
- Embed quizzes within other exercises
- Have a pop quiz

### Papers and Reports

- Make topics specific
- Discourage trivial topics (challenge why, how, which way is best, etc.)
- Avoid using the same topic repeatedly
- Choose interesting topics that tie into student experiences
- Ask questions from a specific point of view
- No last minute topic changes
- Require specific citation style
- Require specific source usage or content inclusion
- Photocopied pages from sources
- Require higher level thinking skills and creative responses
- Use electronic submissions and detection services
- Assess process. Require submission of drafts and/or outline
- Have an oral presentation

need clear definitions of important terms such as attribution, citation, copyright, common knowledge, fair dealing, paraphrasing, plagiarism, and public domain. Despite any distinction students may make, we need to make them aware that overt dishonesty (copying, misrepresentation) and inherent dishonesty (working with others, etc.) are both wrong (Stephens, 2004).

Copying is somewhat aided by the Web. As McCabe (2004) writes,

“Internet plagiarism is a growing concern on all campuses as students struggle to understand what constitutes acceptable use of the Internet. In the absence of clear direction from faculty, most students have concluded that ‘cut & paste plagiarism – using a sentence or two (or more) from different sources on the Internet and weaving this information together into a paper without appropriate citation – is not a serious issue. While 10% of students admitted to engaging in such behavior in 1999, this rose 41% in a 2001 survey with the majority of students (68%) suggesting this was not a serious issue.”

One Web source is paper mills and other online paper sources. In one course, McMurty (2001) caught 5 of 61 students using papers from the Web. To discredit paper mills, go into details sites such as quality of papers and how unlikely it will be to actually fit the detailed parameters of the assignments you will create. Simply acknowledging that you know of their existence may reduce the desire of a student to risk using them. Similarly, blatant copying from the Web can be reduced by explaining to students the unreliable nature of Web sources and how all information needs to be checked for validity.

We do not want students to think that they can't use outside sources though. When something is copied legitimately, students need to understand a proper method for citing electronic resources. Even proper methods for integrating materials into a project, such as taking images from the Web need to be clearly described.

The asynchronous nature of online education means that you do not have to take up class time in order to inform students about these issues. Such information can be presented in an online orientation prior to the start or at the beginning of a class or education program. Unlike a pamphlet, the students can have access to examples and an expert to help when questions arise. Students can also be shown images of people who do not cut corners such as scientists, doctors, business people, etc. Within such an orientation, additional information such as clear policies on copying and punishments can also be given. A key to making these policies meaningful to the students though is to make sure that you, as an instructor, make the students aware that you not

only know about the rules, but will enforce the rules as written. I do not believe that the idea that everyone is cheating along is enough to move someone to cheat but if everyone is doing it and getting away with it, the pull is strong.

Supporting students is the next step to reducing academic dishonesty in any course, but especially in an online environment where additional support needs may manifest. Most importantly, students need some level of technical support. A student already flustered by course content may become exceedingly so if his/her computer suddenly puts him/her a week behind. Consider the students situation and be willing to provide help and possible accommodations if necessary. Some level of institutional support is required on several fronts with regards to student support. The instructor cannot be expected to provide all of the technical support for online students.

Like technology, one cannot expect the instructor to solely bear the burden of instructing students on the use on resources. Institutional libraries or writing offices should provide informational sessions or clinics on proper library research, citation, and even basic writing skills. Someone's ability to write should not become an excuse for failure to show the knowledge held within his/her mind.

Community within the online classroom was already mentioned above in the context of possible benefits related to the current online teaching paradigm. In addition to a community of learners enabling a supportive scholarly atmosphere wherein students may not want to cheat, such a paradigm has other ramifications on honesty. As you get to know your students through constant discourse, you provide an atmosphere where not only do they feel they can come to you for help when needed, but perhaps even that they would not want to let down a good model instructor. Getting to know the students will indirectly lead to getting to know how the students write (Carnavale, 1999). From discourse analysis, one could determine that a given paper does not fit within the usual style of a given student and send off possible plagiarism warning flags. One method of maintaining or establishing community is through collaborative projects and discussion with high levels of interaction. Fortunately, such methods are by their very nature more difficult to cheat within or at least less cost beneficial.

Promoting integrity can also be accomplished through the use of 'honor codes' (McCabe, 2004). Granted, these can not be expected to be as effective online since other students cannot visually see cheating among other students; however, students may 'hear' or discern cheating

that is going on and report it to the instructor. Any reporting that makes the instructor aware of a possible problem can allow the instructor to set up checks to verify the possibly violating student's products.

The next category that I place honesty promotion techniques within is general pedagogy. This is a catch-all category involving all of the small things that instructors can do in order to reduce cheating. Some are involved at the core of the curriculum. It is important that the way in

No snowflake in an avalanche  
ever feels responsible. – Voltaire

which the materials are presented will catch the student's attention. By making the materials relevant, a student will want to learn it. Relevant includes not only to the student but to the course as described. The assessments should reflect the actual objectives of the course as such are what the student expected to learn by taking the course. You also want the materials to be constantly up-to-date so that the students feel that the information matters. It is also more difficult for students to find ready-made materials that will reflect current topics in a way that will allow cheating. S/he will also see the value of what is being learned. When any information is known, and known well, there is no need to cheat for academic reasons.

When creating and giving assignments, a few other principles should be kept in mind. To start with, remember that life is an open book, and so too is any assignment that is given to a student at a distance. If you want an assessment to be closed book, you will need a proctor as discussed later. The students can also be used to generate the knowledge within the course through alternative assessments such as discussion questions. Not only are the students bringing their own knowledge and personality into the course through such exercises, but they can feel empowered as a knowledge producer. Empowerment can be extended even further if you provide some means with which to reward originality in grading.

Several other benefits can arise from variability in types of assignments and grading methods. First, while the student may find someone with whom or from whom to cheat for a given type of assignment, the same may not hold true for all. Also, certain types of assignments will appeal to some students more than others. Varying assessments suggests that at least at some point you may find an activity that each student will like. Assignments such as portfolios, peer review, and critical analysis of given arguments can be more difficult to cheat on because of the personal context that they are placed within and the limited availability of cut and paste sites from which to gather the information externally. If an assessment or group of assessments is

particularly difficult, you can try to make them low stakes in order to encourage students to give it their best try. Low stakes can be obtained by providing many assessments and chances for points throughout a course, breaking a difficult assignment into many parts, reducing the points on the given assignment, or simply rewarding work effort as well as product. While students are completing an assignment, you do not have to pause assessment. Formative assessments during an assignment can be very powerful at forcing students to actually do the work. Process grades help also to insure student understanding throughout various steps that may be involved within a given assignment.

A few other techniques can be helpful when providing an assignment. First, you can make them contingent upon earlier course content. In a way, such assignments force students to keep up with the materials. It shows them that what they learn in the beginning of the course is just as important as what is learned at the end. It also constantly reinforces older information to aid in learning. It also makes it difficult for a student to obtain consistent help on assignments as the help provider would need to be familiar with the course history. When providing assignments, also make sure that you have very clear instructions. Do not let minor misunderstandings put undo pressure on students. Instructions can be clarified even further by providing an example, perhaps of a prior student's work, or even a paper from a paper mill that you have marked up to show what it is lacking. This method is especially useful as it show students the limitations of the paper mills, shows them what you are expecting out of their papers, and provides an example of how you will be grading the assignment.

The next issue of time is a difficult one. You want to make sure that the students have enough time to finish the assignment. At the same time, you don't want them to have so much time that it is easy to get help. Basically, consider the goals of the exercise and how much time should be needed.

Honesty can continually be promoted, even after you might normally have ended an assessment. Both learning and honesty can be promoted through the use of journals, reflections, keys of learning, and various other meta-learning exercises. Such exercises reinforce what the students have learned while providing a way for the instructor to determine if the students actually understood what they were supposedly producing during an assignment. Sharing these reflections as a class helps to foster communal learning environment as well.

My next categorization is quizzing and testing. When appropriate, instructors should not be afraid to use exams, even if multiple choice, in an online course. Sometimes testing has its place, and computerized test-giving tools continue to grow in usability and functionality helping to make computerized test cheating perhaps more difficult than face-to-face exams in some respects (Rocklin, 1999). Advanced testing tools and online course management systems can allow questions to be randomly selected from large question pools causing every student to have different tests. Mathematical values can be randomized among students. Test taking time can be strictly limited to a specific time of day. Passwords can be used that students are only given immediately prior to the test through a specific email address or even the telephone in an effort to make sure the correct person is taking the exam. Test submissions can be limited so that each student only has one chance at the assessment (Rowe, 2004). On a more technical note, assignment submission can be tracked by looking at the IP number from which it was submitted. While these numbers may change, they should remain within a relatively small range for a given computer (Olson, nd).

When measures must be taken to insure student identity and materials use, several methods can aid in increasing academic honesty. The most common method is to require students to attend a proctored exam session at a local school (Currie, 2004; Gray, 1998; ION, 1999; McNett, 2002; Rowe, 2004). So while you can never be absolutely sure that the person completing online assignments is the person signed up for the course, it is possible to determine identity at set assessments using proctors. I am constantly amazed at how adamant some instructors are of this method in their online classes when the same instructors never check student identification in their face-to-face courses. A corollary of this method involves the use of Web-cams between test-giver and test-taker (Gray, 1998; ION, 1999), although many disadvantages such as monetary cost, connecting all students to Web-cams, and time cost since each student must be tested separately, make this method generally unfeasible. Even when such sessions are not used, the likelihood of a student being able to continually acquire help to complete tests and other assessments throughout an online course is low.

Lastly, we look at preventing cheating on papers and reports, one of the most widely discussed issues in any type of education thanks to the prevalence of online paper mills. Keep in mind that techniques used to promote honesty in the traditional classroom can still be used in the online classroom (ION, 1999; McKenzie, 1998; McMurty, 2001; Olt, 2004; Renard, 2000;

Rowe, 2004). These include choice of topics. As an instructor, you can promote honesty by requiring specific topics be used that tie into the students experiences when appropriate in order to get the student interesting in what is being written. You should also discouraging trivial topics within which papers can easily be purchased. Challenging and/or evaluative questions such as how, why, which way is best, etc. provide a framework within which a question must be answered, limiting the ability to find a paper for purchase. Questions can also be made more difficult to cheat within by asking that it be answered from a specific point of view, such as requiring that an environmental topic be covered from the point of view of the government, a company, an environmental group, etc. Finally, avoid using the same topics repeatedly from which students can obtain old papers from and disallow last minute topic changes that might suggest a student was unable to come up with help on the given topic but was able to get help on another topic.

Formatting can also be used as a cheating prevention method. Requiring a specific citation style requires that the student actually have all the required information from the given sources. Requiring certain specific sources be integrated into the paper is a wonderful technique, as it requires a specific piece of information somehow be sensibly integrated into the paper as a whole, something very difficult to do with a pre-made paper requiring that the student probably have had enough knowledge to have written the paper him/herself in the first place. You can also require that the students provide photocopies of the first page of sources used. This not only verifies that the student did the work, but that the sources are legitimate.

Interestingly, some preventions can be used in an online course that may not be as easily rendered in a traditional classroom. A key to catching cheaters is to know the students in the class (Carnavale, 1999; Gray, 1998). Writing style is continually demonstrated in an online course through the text-based dialogue used. The instructor always has a reference on which to judge papers that the students turn in. When discrepancies occur, the instructor may be alerted to possible misconduct. The fact that all assignments are submitted in digital format also makes the use of sites described later such as Turnitin.com (<http://www.turnitin.com>), CopyCatch (<http://www.Copycatchgold.com>), Glatt (<http://www.plagiarism.com/screening.htm>) and EVE2 (<http://www.canexus.com/eve/>) easier. Although in all such assignments, students must submit items on their own with parent's permission and no identifying marks to be completely sure that copyright and FERPA rules have been obeyed (Young, 2001).

Instructors do not have to limit their interaction with the students to text either. Audio technology has advanced to a usable stage on the Internet, and many programs are now available for recording and transmitting audio. Students in an online course can be required to complete an assessment orally and then send the file in some manner to the instructor. The assessment can be directly tied to the student's voice, and with appropriate time limits, the likelihood of academic honesty is improved.

All together, the techniques described above are a good start at increasing academic honesty in your online courses. They also provide useful pedagogical ideas for general course improvement.

"It takes two to lie. One to lie and one to listen." -- 'Homer Simpson' from the television show, 'The Simpsons'

### **Detecting cheating**

No matter what precautions we take, how we chose our students, or how we design our courses, some students are going to cheat. One key to preventing cheating is to actively acknowledge it as described above, but you must also make some effort to actually detect it when it occurs, and furthermore, to punish it once it is found. In this section, we'll walk through some of the easier methods of discernment as outlined in Figure 3. In the absence of proctors, it is unlikely that you will catch a student 'red-handed' in an online course, but that doesn't mean that it is difficult to catch them by other means.

When trying to detect cheating, don't try to do it all by yourself, especially when there is so much help available. This help can come in the form of services devoted to detected plagiarism in written work as shown in Figure 3. Having students submit papers to sites like TurnItIn.com allows a quick method to compare papers to a huge database. FERPA (Family Educational Rights and Privacy Act - <http://www.ed.gov/policy/gen/guid/fpco/ferpa/index.html>) issues can somewhat be avoided by having adult students submit their own papers, but younger audiences will require that parental permission be obtained as such sites retain the papers in their databases. Search engines, while making it easier for students to find materials, also make it easier for you to find the same materials. I was once contacted by an instructor from Maryland who found my paper on the Internet. One of her students had 'borrowed' substantially from a paper that I had on my personal Website. She located my paper through a search engine and thus caught one of her students cheating. Another source of help is the paper mills themselves (Bates, 2004). Just as the students can go there to search for a paper, so can you. Basically, if the

### **Figure 3: Detection Tips**

Bates, 2004; Care, 2001; Carnavale, 1999; Harris, 2002; ION, 2004; McMurty, 2001; Renard, 2000; & Rowe, 2004

- Software & Services
  - EVE 2 ([www.canexus.com/eve](http://www.canexus.com/eve))
  - Glatt Plagiarism Screening Program ([www.plagiarism.com/screening.htm](http://www.plagiarism.com/screening.htm))
  - CopyCatch ([www.copycatchgold.com](http://www.copycatchgold.com))
  - Turn It In ([www.turnitin.com](http://www.turnitin.com))
  - Integriguard ([www.integriguard.com](http://www.integriguard.com))
- General
  - Use a search engine
  - Honor codes and other students
  - Question the student
  - Compare student answers and patterns of answers
  - Way above the student's normal level of achievement
  - Proctors and other methods as described under prevention
- Papers
  - Keep copies of best papers
  - Read papers of the same topic together
  - Check the paper mills
  - Always check reference list (mystery references, changes in reference style, essay contains a reference to its original source, missing references, etc.)
  - Lack of quotes
  - Unusual formatting or formatting changes within paper
  - Too off topic
  - Datedness
  - Anachronisms
  - Anomalies of diction and style (odd writing style, unusual words, complex vocabulary, inconsistent style, etc.)
  - Smoking guns ("copyright 2005, planetpapers.com")
  - Links grayed out

students can find the paper, you or a service can find it as well. [Note: As of this writing, the Bates site did not include <http://ezwrite.com> or <http://www.planetpapers.com/> in her list.] As these databases become more complete and robust, it will become much more difficult for a student to use a stock paper or assignment as his/her own.

Sometimes, the give-a-ways are so obvious that I almost pity the students. Some are just too lazy to do some basic fixes to a paper. These include graying out links, leaving in copyright notices, borrowing from multiple sources without reformatting text or references (leaving various confusing anomalies), citing references in the text without placing them in the reference list, and retained markup from the original such as an underlining that a grader may have added. The work may also be way above the knowledge level of the students, especially when a D student suddenly becomes a B or even A student.

Perhaps my favorite method of detecting cheating is to use the students own fears against them. In general, people feel safe cheating, but there is always a voice in the back of their head questioning whether or not they got away with a dishonest act. As Harris (2002) suggests, tricking the students is sometimes a valuable method. Even if you do not 'know' for sure that a student cheating, you can sometimes make the student feel that you suspect something. You can ask questions on the assignment such as, "I noticed a few anomalies with regards to your assignment and would like to discuss these with you after class." Then provide the student with an opportunity to talk before you start by saying, "Is there anything that you would like to say about this paper before I tell you what I have found?"

Students can also be used to help detect the cheating among other students. The use of honor codes has already been mentioned. Not only can they reduce cheating, but they can cause people to come forward when they see cheating around them. Other reasons such as anger could also bring students forward to notify the instructor of cheating. You can also use work that other students have turned in. Just like the search sites above, you can compare what the students have turned in with other papers, whether in the same course or copies you have kept from previous sections. Paper and test banks are not uncommon among various organizations including fraternities and professional organizations on many campuses. If students have access to copies of old papers, then so should you. You can also read papers with similar topics at the same time. Sometimes, students will work together and copy sections. Interestingly, in my experience, I have found that many do not even consider this cheating but merely working together. They feel that since the work was collectively done, then it is collectively owned. This is true, but in most cases, the work was not intended to have been done collectively, and each student was expected to turn in an original work separate from other students.

Let me end with a few additional tips for spotting copied papers or reports. First of all, rarely will a copied paper have quotes. Sometimes this is because there are quotes, but the quotation was not cited. Other times, the level of scholarship was below the use of quotations. Also, quotations can be a trigger for search engines, and are thus often left out by bulk paper writers. Another hint is the inclusion of anachronisms. A paper discussing how man recently landed on the moon is somewhat dates for example. Finally, topic diversion can be a sign of dishonesty. If the student was given one topic, but turns in a paper on another similar but not identical topic, then a paper may have been found that the student felt was 'close enough'.

## Conclusion

Unfortunately, there are reasons and ways that students will cheat in our society today. We strive to do our best not just to catch students cheating, but give them reasons and perhaps incentives not to do so. Learning is important, and hopefully the students will see what they are learning as important enough to actually learn. In the end, fear not though. By taking the necessary precautions and through effective course design, online education can be both conducive to learning and to academic honesty among students.

## References

- Auer, N.J. & Krupar, E.M. (2001). Mouse click plagiarism: The role of technology in plagiarism and the librarian's role in combating it. *Library Trends* 49(3) 415-433.
- Bates, P. & Fain, M. (2004). *Cheating 101: Internet paper mills*. Retrieved September 1, 2004, from <http://www.coastal.edu/library/pubs/mills2.html>
- Bushweller, K. (1999). Generation of cheaters. *The American School Board Journal* 186(4). Retrieved September 1, 2004, from <http://www.asbj.com/199904/0499coverstory.html>
- Care, J. (2001). *Dead giveaways*. Retrieved September 1, 2004, from <http://www.plagiarized.com/deadgive.shtml>
- Carnavale, D. (1999). How to proctor from a distance. *The Chronicle of Higher Education*, 46(12) A47. Retrieved September 1, 2004, from <http://chronicle.com/free/v46/i12/12a04701.htm>
- Cole, S. & Kiss, E. (2000, May-June). What can we do about student cheating? *About Campus*
- College Administration Publications, Inc. (CAP) (nd) *New research on academic integrity: The success of "modified" honor codes*. Retrieved September 1, 2004, from <http://www.collegepubs.com/ref/SFX000515.shtml>
- Currie, D. (2004). *Academic misconduct online*. Retrieved September 1, 2004, from <http://deserve.etsu.edu/cpahpaper.htm>
- Davis, B.G. (1993). *Tools for teaching*. San Francisco, CA: Jossey-Bass
- Davis, B.G. (2004). *Preventing academic dishonesty*. Retrieved September 8, 2004, from <http://teaching.berkeley.edu/bgd/prevent.html>

- Elbaum, B., McIntyre, C., & Smith, A. (2002). *Essential elements: Prepare, design, and teach your online course*. Madison, WI: Atwood Publishing
- Ford, C. V. (1996). *Lies! Lies!! Lies!!! The psychology of deceit*. Washington, DC: The American Psychiatric Press, Inc.
- Gray, S. (1998). Maintaining academic integrity in Web-based instruction. *Educational Media International*, 3(3) 186-188.
- Grijalva, T. C., Kerkvliet, J., & Nowell, C. (2003). *Academic honesty and online courses*. Retrieved September 1, 2004, from <http://oregonstate.edu/dept/econ/pdf/cheat.online.pap6.pdf>
- Hamilton, D. (2003). Plagiarism: Librarians help provide new solutions to an old problem. *SEARCHER: The Magazine for Database Professionals*, 11(4) 26-28.
- Harasim, L. M. (1990). *Online education: Perspectives on a new environment*. New York, NY: Praeger
- Harris, R. (2002). *Anti-plagiarism strategies for research papers*. Retrieved September 8, 2004, from <http://www.virtualsalt.com/antiplag.htm>
- Illinois Online Network (ION). (1999). Beating cheating online: Preventing plagiarism & cheating in online courses. *Pointers and Clickers: Technology Tip of the Month*. Retrieved September 5, 2004, from [http://www.ion.uillinois.edu/Pionters/1999\\_12.html](http://www.ion.uillinois.edu/Pionters/1999_12.html)
- Illinois Online Network (ION). (2005). *What makes a successful online student*. Retrieved January 6, 2005, from <http://illinois.online.uillinois.edu/IONresources/onlineLearning/StudentProfile.asp>
- Illinois Virtual Campus (IVC). (2002). *Reports and Resources*. Retrieved September 5, 2004, from <http://www.ivc.illinois.edu/AboutIVC/reports.htm>
- Kaczmarczyk, L. C. (2001). *Accreditation and student assessment in distance education: Why we all need to pay attention*. Proceedings of the 6<sup>th</sup> Annual Conference on Innovation and Technology in Computer Science Education. Canterbury, UK, 113-116.
- Kliner, C. & Lord, M. (1999, November 22). The cheating game: 'Everyone's doing it,' from grade school to graduate school. *U. S. News & World Report*, 55-66. Retrieved September 1, 2004, from <http://www.usnewsclassroom.com/issue/991122/cheating.html>
- Ko, S. & Rossen, S. (2001). *Teaching online – A practical guide*. Boston, MA: Houghton Mifflin Co.
- Lathrop, A. & Foss, K. (2000). *Student cheating and plagiarism in the Internet Era: A wake up call*. Englewood, CO: Libraries Unlimited.

- Leland, B.H. (n.d.). *Plagiarism and the Web*. Retrieved September 1, 2004, from <http://www.wiu.edu/users/mfbhl/wiu/plagiarism.htm>
- Lupton, R.A., Chapman, K.J., & Weiss, J.E. (2000) A cross national exploration of business students' attitudes, perceptions, and tendencies toward academic dishonesty. *Journal of Education for Business* 75(4). 231-235.
- McCabe, D. L. (2004). *CAI Research*. Retrieved September 1, 2004, from [http://www.academicintegrity.org/cai\\_research.asp](http://www.academicintegrity.org/cai_research.asp)
- McCabe, D.L. & Pavela, G. (n.d.). *Ten principles of academic integrity*. Retrieved September 8, 2004, from <http://www.collegepubs.com/ref/10PrinAcaInteg.shtml>
- McKenzie, J. (1998). The new plagiarism: Seven antidotes to prevent highway robbery in an electronic age. *From Now On, The Educational Technology Journal* 7(8). Retrieved September 1, 2004 from <http://www.fno.org/may98/cov98may.html>
- McMurty, K. (2001). e-cheating: Combating a 21<sup>st</sup> century challenge. *THE Journal Online* 29(4). Retrieved September 1, 2004, from <http://www.thejournal.com/magazine/vault/articleprintversion.cfm?aid=3724>
- McNett, M. (2002, May/June). Curbing academic dishonesty in online courses. *Pointers and Clickers: ION's Technology Tip of the Month*. Retrieved September 5, 2004 from [http://illinois.online.uillinois.edu/Pointers/2002\\_05/default.asp](http://illinois.online.uillinois.edu/Pointers/2002_05/default.asp)
- Olson, B. (nd). *IPtoLL*. Retrieved September 1, 2004, from <http://www-unix.mcs.anl.gov/~olson/IPtoLL>
- Olt, M. (2002). Ethics and distance education: strategies for minimizing academic dishonesty in online assessment. *Online Journal of Distance Learning Administration*, 5(3). Retrieved September 1, 2004, from <http://www.westga.edu/~distance/ojdla/fall53/olt53.html>
- Palloff, R. M. & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom*. San Francisco, CA: Jossey-Bass Publishers
- Renard, L. (1999/2000). Cut and paste 101: Plagiarism and the net. *Educational Leadership*, 57(4) 38-42. Retrieved September 1, 2004, from [http://www.ascd.org/articles/9912e1\\_renard.html](http://www.ascd.org/articles/9912e1_renard.html)
- Rocklin, T. (1999). Computers and testing. *The National Teaching and Learning Forum* 8(5) 1-4. Retrieved September 1, 2004, from [http://www.ntlf.com/html/pi/9909/techped\\_1.htm](http://www.ntlf.com/html/pi/9909/techped_1.htm)
- Rowe, N. C. (2004). Cheating in online student assessment: Beyond plagiarism. *Online Journal of Distance Learning Administration*, 7(2). Retrieved September 5, 2004 from <http://www.westga.edu/~distance/ojdla/summer72/rowe72.html>

- Slobogin, K. (2002, April 5). *Survey: Many students say cheating's OK*. Retrieved September 1, 2004 from <http://www.cnn.com/2002/fyi/teachers.ednews/04/05/highschool.cheating/>
- Stephens, J. (2004). *Justice of just us? What to do about cheating*. Retrieved September 1, 2004, from <http://www.carnegiefoundation.org/perspectives/perspectives2004.May.htm>
- TIPS for instructional design issues related to academic integrity in online courses*. Retrieved December 12, 2004, from [http://opd.iupui.edu/ctl/idd/docs/tipsheets/design\\_issues\\_acad\\_integrity\\_online.pdf](http://opd.iupui.edu/ctl/idd/docs/tipsheets/design_issues_acad_integrity_online.pdf)
- White, K. E. & Weight, B. H. (2000). *The online teaching guide: A handbook of attitudes, strategies, and techniques for the virtual classroom*. Boston, MA: Allyn & Bacon.
- Young, J. (2001). *Plagiarism and plagiarism detection go high tech*. Retrieved September 1, 2004 from <http://chronicle.com/colloquylive/2001/07/cheat/>

### **Acknowledgements**

This article grew from the beginning of a chapter that I wrote for Ann Lathrop. The contents of that chapter were rather limited, and I wanted to expand on it and create something useful for my audience. Thus, this article evolved as you see it here today. I highly recommend *Student Cheating and Plagiarism in the Internet Era: A Wake-Up Call* by Ann Lathrop and Kathleen Foss as well as the new edition that will be available summer 2005.