Electronic Plagiarism as a College Instructor’s Nightmare—Prevention and Detection

CHARLES L. McLAFFERTY
University of Alabama at Birmingham
Birmingham, Alabama

KAREN M. FOUST
Tulane University
New Orleans, Louisiana

Plagiarism, widespread on college campuses, has become a way of life for some students. Even universities with honor systems are not exempt. At the University of Virginia, a single professor’s investigation resulted in the charging of 158 students with plagiarism. The physics professor involved, Lou Bloomfield, developed software that cross-checked hundreds of papers submitted for a beginning physics course and turned up numerous instances of copied text (Heuchert, 2002).

Incidents such as these indicate the presence of a new student ethos in which plagiarism and other forms of cheating are common and even acceptable. As professors, we have confronted situations of blatant plagiarism and have received responses such as the following: “I have completed these types of assignments for several... instructors in the same manner and have never been questioned or accused of plagiarism before” (anonymous personal communication, student appeal letter, May 9, 2002).

Every profession has a “holy grail” that involves an element of trust necessary for that profession to survive and thrive. For example, in the world of business, we assume that financial statements are accurate (well, we once did), a check is a good-faith payment, and a dollar bill is genuine. Violations of these assumptions could cause the collapse of our financial system. In academia, we assume that the words written by a researcher have a purposeful basis and, unless otherwise attributed, are his or her original work. When these assumptions fail, chaos results, and credibility is threatened for the entire profession. Words are academics’ currency and bond.

Thus, plagiarism threatens the very heart of academia. The presence of billions of Web pages that provide access to information on every imaginable subject serves as an unprecedented resource and tool for the cut-and-paste con artist to use in “creating” unoriginal works. The Internet has made plagiarism easy, efficient, and routine. Fortunately, cheating has become even easier to catch, if the instructor knows what to look for and how to find it.

ABSTRACT. Plagiarism, aided by the emergence of massive databases of information on the World Wide Web, has become commonplace on college campuses and in business schools. Because prevention is preferable to policing, in this article the authors (a) present methods for educators to define plagiarism and educate students in appropriate citation and paraphrasing and (b) provide assignments and expectations that will minimize the need and possibility of cheating. The authors also suggest potential “red flags” as well as software and Web services that aid in investigation of possible Internet plagiarism.

Ultimately, the best tool against plagiarism is prevention. The relationship established by the instructor can be pivotal. When students are instructed appropriately and given certain types of assignments, plagiarism is minimized or rendered virtually impossible.

In this article, we discuss cases of plagiarism and signs given by students that may indicate the possibility of cheating. We then demonstrate tools and techniques for recognizing and identifying copied text. Finally, we provide an overview of suggested approaches intended to prevent plagiarism altogether. Our intent is to provide a clear understanding of “red flags” given by those who cheat, tools available to detect plagiarism when it occurs, and methods that may prevent plagiarism altogether.

Experiential Background of Authors

In comparing notes, we found that we were confronting nearly identical issues in the classroom. Although both of us routinely deal with instances of plagiarism, one of us discovered extensive electronic copying in a dissertation proposal. In discussing the issue with other colleagues, we discovered that the problem is not an isolated one. Our literature search further confirmed this trend. One article notes that submissions to a
prominent journal have been found to contain plagiarism (Levin & Marshall, 1993); another documents the problem in graduate programs (Fly, van Bark, Weinman, Kitchener, & Lang, 1997).

**Tips for Detecting Plagiarism**

In our experience, a student engaging in plagiarism almost always leaves a “calling card.” Because the student is taking a major short cut in preparing academic work, the instructor can systematically watch for signals that are consistent with plagiarism. The following “red flags” have emerged from our experiences and research.

The first overall rule of thumb is that a plagiarized paper is likely to be congruent. This incongruity may manifest itself in several ways. Usually, the professor notes that the finished product demonstrates a skill or knowledge level different from the student’s ability. Most often in our experience, the student turns in a paper reflecting an ability well beyond his or her own (Moore, 2002). The paper may reflect a level and depth of knowledge greater than even the instructor’s, or a note of authority that is beyond the student’s range of work. Conversely, a student may turn in a paper written at a primitive level. Our first rule is, whenever possible, to know one’s students. This can be accomplished by gathering a writing sample on the first day of class (McKeachie, 2002); for example, students can fill out demographic information and include a couple of sentences regarding why they are taking the course and what they want to get out of it. Students can be asked to write a short paper, which the instructor can copy and file (Renard, 1999). Alternatively, the instructor can approach writing as a process and require students to turn in drafts as they make progress on their papers (Leland, 2002; Malouf & Sims, 1996; McKenzie, 1998; Renard, 1999). In addition, instructors’ interactions with students are valuable data to be considered in reading papers.

One red flag involves the discovery of incongruities within the paper itself, as when theories, authors, or facts are blended or confused. In one case, the reader stumbled when he found a nonsensical sentence that blurred two theories, or the ideas of two writers. On further research, he determined that two different sections of source material had been combined, connecting half a sentence from one section with the end of a sentence from a different section.

A similar incongruity may arise in the “voice” of the paper’s writer. A writer may write the introduction, then copy and paste the rest from other sources, thinking that the instructor will only read the first page. Alternatively, by pasting together different papers, the voice may change. In either case, the writer’s voice will be inconsistent. Writing may be superb in one sentence or paragraph and suddenly error prone in the next. Another sign is the use of a first-person perspective for one part of the paper and a third-person one for the rest.

Moore (2002) mentioned that the instructor should be alert to anachronisms in the paper. Some examples might be a reference to Bill Clinton as “our newly elected President” or a mention of HealthSouth as one of the most successful health care corporations in business history. Another, more subtle sign, is the use of references that are all older than a certain date (Senechal, 2003), even though the topic is “hot.” For example, we read one paper on technology implementation, but all the references originated at least 3 years earlier.

When the student uses a so-called “paper mill” or paper writing service, the red flag may be the article’s apparent lack of “fit” with the topic assigned or chosen. Usually, papers already created have to be modified to fit the topic. Although a unique topic may be simply a reflection of a student’s passion (which should be encouraged), the topics of plagiarized papers are usually more mainstream in comparison (Senechal, 2003).

It might be helpful to ask students to submit papers by e-mail. One paper sent by e-mail had numerous hyperlinks in the bibliography. Only one third of the links were valid, which would be consistent with plagiarism; several were not active. Papers submitted by e-mail or on disk also can be checked easily for plagiarism.

One caveat is in order: The presence of red flags in a paper is not necessarily proof of cheating but rather an indication that further investigation might be appropriate. For example, a student’s confusion over theories may lead to blending of theories; a student’s inability to write may result in his or her use of different voices in the same paper. It is important for the instructor to gather further evidence rationally and systematically when considering the possibility of cheating.

**Investigating Suspected Incidents of Electronic Plagiarism**

In general, three tools can be used to investigate Internet copying: search engines, plagiarism Web sites, and software that checks for identical wording between specific sources. Although search engines are “quick and dirty,” they can be time consuming when a professor has many papers to grade. Plagiarism Web sites allow a more consistent, thorough check of Internet sources, though they vary in speed and coverage. Although cumbersome and limited to checking for student collusion, software is available for checking among papers for identical wording.

The easiest and fastest way to check for suspected Internet plagiarism is to use a search engine (Leland, 2002; Senechal, 2003) such as Lycos, Ask Jeeves, Dog Pile, or (our favorite) Google. To use them, one initiates the search engine and inserts a phrase that appears particularly unique in the paper. Most search engines allow the use of quotation marks around the quote to search for words in exact order. This is particularly useful when vocabulary or phrasing is noticed that is incongruent with a student’s ability or background. For example, the following quote from a student’s paper was entered into a search engine to reveal the source: “Organizational complexity has three main characteristics: numerosity, diversity, and interdependence.” In this example, the wording was incongruent with the student’s vocabulary and usage in class, and the use of the word “numerosity” was a red flag for the instructor.

The advantage of using search engines is that they give immediate results at no cost. They likely have the
most updated indexes of Web sites, because they use robot crawlers to explore the Web daily looking for new or changed information. It may be helpful to use more than one search engine, as each database tends to be somewhat different.

Another, more common approach, is the use of plagiarism software used by Web sites. These tools include Turnitin (Turnitin.com, 2003) and Plagservel (Shevchenko, Litvin, & Lugovskyy, 2003). Although the services of Turnitin are by fee-based subscription, Plagservel had no charge until recently (under new ownership, it has changed its name to MyDropbox.com [Mydropbox.com, 2003] and will begin charging for services). Both services have a 24-hour turnaround time. In an unscientific, informal comparison, we found that Plagservel found more sources than Turnitin but resulted in more “false positive” identifications of copied works. However, Turnitin maintains every paper checked as part of its database, so it is able to check for collusion between students.

A third approach is to use plagiarism software that has been designed to look for text that is similar or identical to other documents available on the Internet as a whole. Bloomfield (2002) has developed software that compares text documents with each other, although it does not compare documents to those available on the World Wide Web. This software is ideally suited for detecting student collusion (copying between papers or re-use of papers from one year to the next), as likely occurred in the Greek system at the University of Virginia.

Prevention of Plagiarism

Three practices are commonly used to prevent or discourage plagiarism. The first involves the stance that the instructor takes toward students; the second involves student education regarding the definition of plagiarism and the knowledge, skills, and abilities necessary for appropriate citations and paraphrasing; and, finally, the third relates to alterations of the classroom atmosphere and assignments that minimize the possibility of cheating.

Instructor Stance

Novice college professors can find several books offering suggestions on how to establish a good tone and atmosphere during the first days of class (Boice, 2000; McKeanicke, 2002; Whitley & Keith-Spiegel, 2002). These approaches have the added benefit of creating greater rapport between students and the instructor and thus can enhance the communication of instructor requirements and expectations regarding plagiarism (Whitley & Keith-Spiegel, 2002). A student sense of alienation may encourage or lessen inhibitions to plagiarize (Ashworth & Bannister, 1997). Soliciting feedback from students during the term (Boice, 2000), mingling with early arrivals, and making oneself more available to students (McKeachie, 2002; Whitley & Keith-Spiegel, 2002) are some techniques for increasing rapport.

Defining Plagiarism

Many students (and faculty members) do not know the difference between plagiarism and paraphrasing (Ashworth & Bannister, 1997; Roig, 1997, 1999). Providing a concise definition of plagiarism can solve this problem. Ideally, the topics of plagiarism and appropriate citation should come up in class multiple times. For example, the school's definition of plagiarism might appear on the syllabus; when specific assignments are given, one or more examples of appropriate citations can be provided on the assignment sheet, with references and Web sites for further help. Style manuals usually have “rules of thumb” regarding plagiarism. For example, three sequential words copied from another source without use of quotation marks is sufficient to denote plagiarized material in one such manual, the Publication Manual of the American Psychological Association (APA, 2001).

However, it is important to note that there are two kinds of plagiarism: lack of sufficient paraphrasing and inappropriate (or nonexistent) attribution of ideas. Appropriate attribution of ideas is particularly problematic, because some students report being afraid of writing anything, for fear that it may have been already written unknowingly by someone else (Ardito, 2002; Ashworth & Bannister, 1997; Wilhoit, 1994).

Along with the definition comes a written standard of plagiarism, which provides a guideline for students to follow in working with text. Such a standard is best implemented, however, with some form of hands-on training.

Prevention: Education and Training

One of the problems faced by instructors is the intimidating nature of the Publication Manual of the American Psychological Association (APA, 2001), even to veteran writers. Giving students experience helps them understand that they are capable of using appropriate attribution. Several Web sites offer help with using APA style (e.g., Dewey, Scott, & Scribe, 2003; Purdue University Online Writing Lab, 2003; University of Wisconsin-Madison, 2003). Even limited experience with paraphrasing and identifying appropriate and inappropriate citations in class is helpful to students (Wilhoit, 1994). Maas (2002) provides an approach using the E-Prime method to train students in paraphrasing. Auer and Krupar (2001) suggest that the instructor find sympathetic librarians willing to instruct classes in appropriate research and citation techniques.

Specific exercises using text similar to wording that the student will be using can be presented to allow the student to identify whether or not a passage has been plagiarized or appropriately cited. Other exercises can be used to help students, in teams, learn to appropriately paraphrase material. Such assignments help hone the student's discernment and to sensitize him or her to issues of correct usage (Wilhoit, 1994). If this exercise is conducted in class (or in voluntary workshops outside class), it will send an unambiguous message about acceptable and unacceptable practices.

Plagiarism is best discussed in the context of issues involving questions such as “What is fair?” and “Why is intellectual property an important concept in academia?” (Leland, 2002; Whitley & Keith-Spiegel, 2002). Such topics involve discussing the students' own best interests and are more likely to
attract their attention than the standard “do not cheat” lecture.

Prevention: Atmosphere Creation

McKeachie (2002) takes the stance that students do not want to plagiarize; writing a paper may seem so complicated and overwhelming that they feel that they do not have a choice. The structure of a course may help to minimize plagiarism (Moore, 2002). Breaking up the project into simple steps, each with discrete deadlines, is also helpful (McKeachie, 2002). Instructors should consider avoiding broad, fact-based assignments that encourage students to “appropriate” pre-existing materials from the Internet. An interesting side effect of boring, irrelevant assignments is that students feel justified in plagiarizing (Ashworth & Bannister, 1997; Whitley & Keith-Spiegel, 2002).

Rather, instructors should endeavor to make assignments meaningful and unique. Moore (2002) requires students to bring in lyrics from favorite songs or current newspaper articles. These are used as the basis for writing activities.

Some instructors prefer assignments involving questions that require unique answers from the student. For example, a student may select a research topic early in the course and be asked to design an appropriate methodology. Questions also may be related to the students’ unique connection to the course. One possibility would be asking students to discuss their understanding of course material in relation to their own life experiences.

Instructors also may require multiple drafts and ask students to hand in source documents with drafts and/or the final copy (McKeachie, 2002; McKenzie, 1998; Renard, 1999; Whitley & Keith-Spiegel, 2002; Wilhoit, 1994). If students are required to e-mail assignments, it is easier for the instructor to use search engines and follow hyperlinks.

Summary

Plagiarism is an increasing concern on college campuses, possibly in large part because of the emergence of massive databases of information on the World Wide Web. Instructors are well advised to be alert to the “red flags” that indicate the need for further investigation. Software and Web services such as Google, Turnitin, and Plagiasr are valuable tools in investigating suspected incidents of Internet plagiarism.

Prevention of plagiarism is preferable to policing papers. By defining and discussing the topic of plagiarism on multiple occasions in class, the instructor will make students aware of his or her expectations. Educating and training students through hands-on exercises and examples of plagiarism, paraphrasing, and appropriate citation encourage students to develop appropriate knowledge and skills to avoid theft of intellectual property. In addition, the course assignments and expectations can be structured in a manner that minimizes the need and possibility of cheating.

NOTE

This article is based in part on a presentation at the annual meeting of the Mid-South Educational Research Association, Chattanooga, Tennessee, November 6–8, 2002.

REFERENCES


