Detection and Deterrence of Plagiarism in Online Learning Environments

Alan McCord
Lawrence Technological University, USA

INTRODUCTION

Student plagiarism inhibits student learning and damages institutional reputations. Online learning provides different opportunities for student plagiarism than in the traditional classroom, and many observers question whether online learning environments can demonstrate the same level of academic integrity found in traditional classrooms.

One method of combating plagiarism is the use of plagiarism detection software, which are licensed for individual use or integrated into an institutional course management system (CMS). Understanding the nature of plagiarism and implementing a plagiarism education and detection program can improve the effectiveness of these tools and therefore improve the quality and reputation of online programs.

This article focuses on how plagiarism may be reduced in online learning environments. The article begins with a definition of plagiarism and the characteristics of online learning environments that make them vulnerable to student plagiarism. A review of plagiarism detection technologies and the capabilities of popular detection tools are discussed. The article then addresses how plagiarism detection software can be systematically implemented in support of online learning programs: establishing academic integrity policies, improving the design of assignments and assessments, and establishing effective education programs. The article concludes by exploring future developments in online learning environments and plagiarism detection technologies.

BACKGROUND

Plagiarism is the reproduction or inclusion of another person's creative work into one's own work without properly attributing the included work to the original author. Most students understand that submitting another author's entire work as their own is clearly plagiarism, but are often confused about how to summarize and cite the works of others. Furthermore, students may not understand that submitting their own previously submitted original work, in whole or in part, is considered self-plagiarism as it misrepresents their efforts in a current class.

Educational institutions usually define plagiarism within the context of academic integrity, such as this definition from Lawrence Technological University (Lawrence Technological University, 2007):

The term "PLAGIARISM" includes but is not limited to (a) the use, by paraphrase or direct quotation, of the published or unpublished work or creative and/or intellectual property in print, product, or digital media of another person without full and clear acknowledgment; (b) the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers, reports, or other academic materials; or (c) the appropriating, buying, receiving as a gift, or obtaining by any other means another person's work and the unacknowledged submission or incorporation of it in one's own work. Plagiarism is unethical, since it deprives the true author of his/her rightful credit and then gives that credit to someone to whom it is not due.

Aside from the ethical violation of failing to acknowledge the accomplishments of others, plagiarism is "materially misleading if it could cause a reasonable reader to be mistaken as to source of the words, ideas, or data in a way that could benefit the author submitting the work" (Brigham Young University Law School, 2007). We will return to the concept of material benefit later in this article.

Numerous researchers have documented the extent of plagiarism and student cheating over the past 60 years (Hart & Friesner, 2004). Plagiarism is acknowledged as a widespread phenomenon, with a majority of students in most disciplines admitting to some form of academic dishonesty during their academic careers. A

Web search can identify thousands of Web sites where students may download essays. Coastal Carolina University maintains a Web site listing over 250 "paper mills" and plagiarism sites (Bates & Fain, 2006). The existence of these sites confirms the findings of high levels of student plagiarism and cheating.

There are claims that it is easier to cheat in an online class than in a traditional classroom (Heberling, 2002), based in part based on the observation that online instructors have a "narrower bandwidth" to observe student behaviors than in a traditional classroom (Rowe, 2004). Traditional students, however, have the same access to plagiarism techniques as online students. A student submitting a plagiarized hard-copy essay in a traditional class may have less chance of being detected than a student submitting the same essay in an online class using an integrated plagiarism detection service. Furthermore, online students have less need to use traditional cheating exploits such as copying from a neighbor's test paper, writing formulas on their palms, or text messaging with other students during class. This article does not address whether online or traditional classrooms are more open to plagiarism, but rather focuses on how to design online learning environments that promote academic integrity and minimize the chance that students who attempt to cheat will gain material benefit from their behavior.

Online Education Alters Conceptions of Plagiarism

The Sloan Consortium reports that almost 3.2 million U.S. students enrolled in online classes in Fall 2005, and that the annual growth rate for online classes is approximately 35% (Allen & Seaman, 2006). The rapid growth of online enrollment is accompanied by several trends that together change our understanding of plagiarism:

- The explosion of information available on the Internet has changed that students' perception of how knowledge is organized and presented (Adeva, Carroll, & Calvo, 2006; Carroll, 2005). Most students start their class research by using a Web search engine, despite understanding that the integrity of their findings may be suspect.
- The globalization of higher education has resulted in more heterogeneous online classrooms. In addition to students with different cultural and educational backgrounds, students interact with online environments in more diverse ways than they do with traditional classrooms. Students may never interact with an online environment when an instructor is present, and both students and faculty may participate online in relative anonymity.
- Course management systems provide faculty with new tools to organize course content, package assignments, conduct assessments, facilitate discussions, and maintain digital copies of student work. In many ways the CMS environment is more structured than a traditional classroom environment, and therefore may result in more homogeneity of student academic artifacts.
- The availability of online databases, bibliographic management software, and plagiarism detection tools provide students and faculty with new ways to improve the quality of academic work by verifying the authenticity of academic works and the accuracy of citations.
- Chief academic officers perceive online programs to be of equal or better academic quality than traditional instruction (Allen & Seaman, 2006), and the rigorous design of online programs and their use of instructional technologies may contribute to this perception. Online classes expose several inadequacies of traditional methods of designing academic dialog, constructing assignments, and assessing student performance. Many traditional techniques are not easily transferred into the online world, and therefore faculty need to use new approaches more appropriate for online instruction. Likewise, traditional methods of assessing student performance, such as the use of term papers and paper-pencil examinations, are easily compromised through plagiarism or other forms of cheating.

Online students are required to use the Internet to participate in class, and this fact shapes their expectations of what it means to be a student. Unfortunately, it is easier and less expensive to plagiarize today than prior to the advent of the Internet (Granitz & Loewy, 2007). Because it is so easy to plagiarize, students may plagiarize without recognizing that they are doing so, even though they believe that plagiarism is ethically