Plagiarism detection service in the learning environment – A testing tool or a self-management tool?

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Abstract

Regardless of industry, communication is a highly valued management skill. Ability to communicate clearly is an essential part of the interaction between managers and their subordinates. Business students are increasingly using Internet in their studies to conduct research, complete web-assignments, engage in computer games and simulations, utilize course management software, and use blogs, emails, and discussion boards. Students see the Internet as a first resource for sources when completing assignments. This poses two problems. Many of them do not possess the skills to evaluate the credibility and quality of information presented on a web page; they are also not familiar with the academic databases that contain scholarly works on the topics they are researching. Educational institutions have taken steps to combat this rise in academic dishonesty and to train the students to behave ethically. Technology-based tools that identify commonalities between documents have become a necessary part of the plagiarism prevention arsenal at many institutions. While some instructors see these tools as a means to test students’ work, other instructors provide students access to a plagiarism detection tool to manage their work and ensure that the final work contains acceptable original work.

Keywords: ????????????????????
Introduction

Regardless of industry, communication is a highly valued management skill. Ability to communicate clearly is an essential part of the interaction between managers and their subordinates. While business students’ quantitative skills are prized by hiring companies, their poor writing and oral communication skills have been a source of perennial complaint among employers, according to the Wall Street Journal (WSJ). Employers and writing coaches say business-school graduates tend to ramble, use pretentious vocabulary, and pen casual writing style when it comes to business communication. The Graduate Management Admission Council (GMAC), which administers the Graduate Management Admission Test (GMAT) reports, average essay scores fell to 4.4 out of 6 in 2010, from 4.7 out of 6 in 2007. According to the GMAC Corporate Recruiters Survey (2011) results, three-quarters of employers (86%) seek graduates with strong communication skills. Faculty teaching in business school expects students to develop and demonstrate at least minimal speaking, listening, classroom management, interpersonal, and written communication skills in order to complete their studies successfully. Written assignments are used in a majority of courses to assess student learning. However, it appears that business students exhibit mixed feelings towards oral and written communication assignments. On one hand, students welcome business electives in oral communication. On the other hand, writing coaching classes draw fewer enrollments (WSJ, 2011).

Business students are increasingly using Internet in their studies to conduct research, complete web-assignments, engage in computer games and simulations, utilize course management software, and use blogs, emails, and discussion boards. Students see the Internet as a first resource for sources when completing assignments. This poses two problems. Many of them do not possess the skills to evaluate the credibility and quality of information presented on a web page; they are also not familiar with the academic databases that contain scholarly works on the topics they are researching. A second problem is created by the ease with which material from a web page can be included in a student’s written assignment.

According to McCabe et al. (2001), close to 82% of student admit to cyber-cheating. Although all cheating is not plagiarism, the use of the Internet and its ease of cutting and pasting of unattributed material into written assignments increase the plagiarism rate. Carroll (2002) discovers approximately 350,000 academic essays for sale on the Internet and finds that cutting and pasting is the most common way for students to plagiarize from the Internet. The age of information sharing through the Internet appears to increase the temptation to plagiarize due to the widespread availability of information in digital form and the ease with which text can be downloaded, copied, and pasted into another document. Goffe and Sosin (2005) show the ease with which one can cheat using Google search engine. In a web search for the term “macroeconomics”, two of the sponsored links that appear on the top of the page were for paper mills producing papers for sale to student.

Educational institutions have taken steps to combat this rise in academic dishonesty and to train the students to behave ethically. Technology-based tools that identify commonalities between documents have become a necessary part of the plagiarism prevention arsenal at many institutions. While some instructors see these tools as a means to test students’ work, other instructors provide students access to a plagiarism detection tool to manage their work and ensure that the final work contains acceptable original work. This posed an interesting question for us: What motivates faculty to choose the use of a plagiarism detection service? Why and when would a faculty member choose to use a plagiarism detection service as a testing tool.
rather than as a self-management tool? What are the implications of the different approaches for student behavior? The aim of this paper is to address these questions and determine if and when there is an advantage in using one approach over the other.

Research on Plagiarism among Higher Education Students

Paldy (1996) characterizes plagiarism as a “problem that won’t go away and is growing bigger.” Alschuler and Blimling (1995), Ashworth et al. (1997), Weeks (2001), Seppanen (2002), and Park (2003) speak about the multi-dimensional “epidemic of cheating,” coming from many countries, embracing both undergraduate and graduate students including public and private institutions of higher education. There are many definitions of plagiarism, some of which involve intent to misappropriate another’s words and some of which expand beyond words to ideas. For example, Green (2002) traces the term “plagiarism” to the Latin work “plagiaries” – a kidnapper. In Merriam – Webster dictionary, “plagiarism” is defined as “stealing and passing off (the ideas or words of another) as one’s own.” “Using (another’s created production) without crediting the source,” or “presenting as new and original an idea or product derived from an existing source.” Bast and Samuels (2007) state that while there is a general agreement as to what is meant by plagiarism, there is no standard definition of the term. Authors go further and categorize plagiarism into “unintentional” and “intentional” plagiarism. They argue that in many instances it is almost impossible to separate them. Furthermore, there is little consensus as to whether to treat self-plagiarism – borrowing from one’s own prior publications (e.g., republication with new title only; republication with new title, introduction, and conclusion; publication of rewritten publication; publication of partially rewritten publication) without acknowledging the source – as intellectual dishonesty. Authors conclude that more education about plagiarism is needed. Regardless of the definition, plagiarism is a complex issue, as has been noted by many researchers on this topic (for example, Ashworth et al, 1997; Weeks 2001; Park, 2003; Macdonald and Carroll, 2006).

Current research on plagiarism appears to fit into two major categories. The first category of research has examined the phenomena of plagiarism and academic dishonesty focusing on definitions and boundaries of plagiarism, and cultural and geographic differences in perceptions and evaluations of plagiarism. Thomas (2004) explains that plagiarism has always been part of human society, has manifested itself in different forms and situations, and has been taken more or less seriously in different parts of the world. At first glance, plagiarism appears to be a concept that is easy to comprehend; however, in reality, it is very complex in its definition. Green (2002) points out that it is not always easy to separate writing that is copied with the intent of being passed off as the plagiarist’s own work from writing that is simply subject to the inadvertent “influence” of earlier work. Stone (2009) explains that Western and Eastern culture treat copyright and plagiarism differently. He states that where a classical Chinese historian, for example, finds a precision, Western culture may see it only as copying from unidentified sources. In the academic setting, Carroll (2003) notes that the formal definition of plagiarism provided to students in many cases varies according to the discipline, the context, institutional regulations, and professional code of ethics. Previous studies suspect that the phenomena of plagiarism can be attributed to individual ethical values (e.g., Lysonski and Gaidis (1991), Whipple and Swords (1992), Oklleshen and Hoyt (1996), Kennedy and Lawton (1996)); cultural differences and age (e.g. Harris (1990), Kennedy and Lawton (1996)); gender (e.g., Harris (1989), Galbraith and Stephenson (1993)); religiousness, level of education, previous ethical
training (e.g., Harris (1989), Introna et al. (2003)); awareness of academic codes of conduct, and finally to perceptions of how professional associations influence personal values (e.g., Boyd (1981-1982), Harris (1990), Marshall and Garry (2005a)).

The second stream of research takes a more practical stance; research in this category looks at how plagiarism can be detected and prevented as well as sanctions for those engaged in this activity (e.g. Worthen (2004), Thomas (2004), Goffe and Sosin (2005), Lehobye (2010)). Marshall and Garry (2005b) recommend that universities must develop more formal definitions of plagiarism and illustrate it with specific examples of activities that are not permitted and how misconduct can be avoided. Liddell and Fong (2008) advocate shifting the focus from campus plagiarism policies of detection and punishment to fostering student-centered cultures of honesty and academic integrity. Jones et al (2005) suggest that universities should engage in a periodic review of the policy on academic dishonesty. Instructors when preparing class assignments need to develop questions which allow students the opportunity to locate, retrieve, process and interpret information rather than regurgitate it. These assignments should be revised each semester. Students need to be taught correct skills and approaches to referencing and paraphrasing. Furthermore, instructors have to inform students of the penalties for academic dishonesty.

Preventing Plagiarism among Students – Use of Plagiarism Detection Tools

How can educators most effectively teach students to avoid being caught unawares in the midst of having committed an act of plagiarism? Educating the students about the perils of plagiarism is one route; in fact, many higher education institutions have created online tutorials and assessments for students and require students to complete such self-paced online tutorials on prevention of academic dishonesty. Other institutions offer workshops on prevention of plagiarism on campus multiple times during a semester. Instructors offer advisory and cautionary comments to students in the classroom, when assigning written work. Educational institutions have naturally taken a very serious stance on this issue of academic dishonesty, with faculty and/or student committees reviewing reported acts of academic dishonesty and disciplining the perpetrators of such acts. In most institutions, multiple acts of academic dishonesty will result in expulsion.

When training does not suffice, educators have to resort to other means to detect and stop plagiarism. Using web search engines is one quick and ready option for detection, though it may become tedious when there are a number of assignments to assess. A number of plagiarism detection tools are also available in the market today1 (e.g., www.Turnitin.com; www.plagiServe.com; www.Findsame.com, making the detection process a lot easier. Many of these tools also comb a wider range of databases than the web search engines when examining the papers and searching for matches. Most educational institutions purchase institutional licenses for use of a detection tool by their faculty in classes.

Symons (2003) and Savage (2004) characterize Turnitin.com as one of the most popular plagiarism detection web tools. Turnitin.com is a for-profit company which was founded in 1996 by a group of UC Berkley researchers in an attempt to monitor recycling of undergraduate research papers in classes with high enrollment. The company’s business plan revolves around

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1 University of Maryland University College’s Virtual Academic Integrity Laboratory’s website at http://www.umuc.edu/cip/vail/faculty/detection_tools/choosing.html categorizes and lists a number of detection tools.
charging universities a modest fee for its services which include originality checking, online grading, and peer review. Turnitin.com has the most effective algorithm compared to other available plagiarism detection tools and its database grows daily. Results of an iParadigms survey in April 2010 show that Turnitin helps students build better writing skills (75% of respondents); assists faculty to become better instructors (72% of respondents); saves time compared to conventional methods (81% of respondents); and conserves printer paper and ink (71% of respondents). Currently, the company serves over 10,000 institutions of higher education, high schools, distance learning and middle schools in 126 countries (http://www.Turinitin.com). The popularity of this tool comes with its own set of problems; a search using the Google search engine YouTube shows items that explain how to circumvent Turnitin’s algorithm.

Instructors use plagiarism detection tools primarily in two different ways. They use the tool as a means to test students’ papers for originality; this may be accompanied by in-class discussions on ways to prevent plagiarism and academic honesty. Some instructors have voiced the opinion that students, especially in graduate courses, should be aware of requirements regarding originality and do not need any further instruction. Other instructors provide access to the plagiarism detection tools to students, allowing them to use the tool during the writing process to manage any unoriginal work that may creep into the paper. We hold that this difference in the use of plagiarism detection tools stems from a difference in pedagogical approaches.

**Student Perceptions of Plagiarism**

Studies of student attitudes and perceptions about plagiarism are often contradictory. For example, Sutton and Huba (1995) find broad agreement among students about what plagiarism means. At the same time, Barnett and Dalton (1981), Overbey and Guiling (1999) report great variability in student perceptions about plagiarism and cheating in general. Roberts and Rabinowitz (1992) stress that student perceptions of plagiarism are contingent upon the interplay of multiple factors (e.g., need provocation, opportunity, and intentionality). Payne and Nantz (1994) find that “according to many students, there is a significant difference between “blatant cheating” and other forms of academic cheating (e.g., plagiarism).” In general, they report that many students regard plagiarism as “no big deal.” Ashworth et al. (1997) concur. In their study, students often view plagiarism as a relatively minor offense. Sutton and Huba (1995) explore the impact on North American student perceptions of academic dishonesty of race and religion. African-American and white students have different opinion about plagiarism. Also, students who are active in religious activities exhibit a different attitude towards plagiarism compared to students who are less involved in such activities. Roig (2001) uncover that academic staff view on plagiarism varies across disciplines.

Park (2003) points out that the available statistics on students’ plagiarism do not paint a very consistent picture about the scale and the nature of this problem, the extent it varies from country to country, from subject to subject, between private and public institutions of higher education and amongst graduate and undergraduate students. In general, comparative data on plagiarism are hard to find, and ambiguous and inconsistent for two main reasons: first, existing studies differ in focus; second, many studies rely on self-reporting by students. Nevertheless, educators need to recognize the causes of plagiarism in order to address them effectively (Weeks, 2001). Meade (1992) reports that cheating is the most commonly seen in business
schools, school of engineering, science, and humanities. Diekhoff et al. (1999) uncover similarities and differences in attitudes between American and Japanese college students. Lupton et al. (2000) find significant differences in behavior among Polish and US business students; 55 percent vs. 84% percent report having cheated. Brown (1995) reports no difference in frequency and instances of plagiarism amongst graduate and undergraduate students. However, McCabe and Bowers (1994), Diekhoff et al. (1996), Baty (2000) show that instances of plagiarism increase dramatically over time. In overall, existing empirical work shows that plagiarism by students is common and getting more serious. Therefore, Macdonald and Carroll (2006) call for colleges and universities to adopt a holistic approach to ensure that staff as well as students gets the message about academic integrity.

**Discussion: Pros and Cons of using PDT**

The spread of technology designed to combat plagiarism has created a set of challenges for faculty members determined to eliminate plagiarism in the classroom. One expert on plagiarism, Rebecca Moore Howard (Parry, 2011), is concerned that the widespread adoption of anti-plagiarism online tools positions faculty as “police officers” and creates a “climate of suspicion in the classroom.” Author admits that gauging the spread of plagiarism is complicated. Approximately 62 percent of undergraduates and 40 percent of graduate students admit to having cheated on written assignments. According to study conducted by faculty at Drew University, it is not uncommon for students to engage in “dragging sentences out of random, simplistic sources, and pasting them together in an often incomprensive pastiche” (Parry, 2011).

It appears that many colleges and universities mandate that all written assignments be submitted to a digital “pat-down” and adopt a zero-tolerance attitude towards plagiarism. Gibbs (1992) argues that experiential learning or learning by doing encourages a high level of involvement, which is likely to motivate students and raise awareness of their existing knowledge. McLoughlin and Luca (2001) urge faculty to facilitate a student-centered approach rather than a teacher-focused approach; adopting a learner-centered pedagogy would require a focus on learner-centered and performance-based activity. For example, instructors at NYU’s Stern School of Business choose to replace written assignments with oral exams, introduce assignments that rely on library resources rather than online research, craft creative plagiarism-proof projects that require students to turn in interview recording, submit their work at different stages of the writing process, and blend personal narratives with their research. Another strategy is to utilize Turnitin.com as a learning tool rather than policing tool. Faculty can require students to turn in their drafts to Turnitin.com and check the originality reports themselves. This approach may be especially helpful to international students for whom English is not their first language and who, as Deckert (1993) points out, “in settings of higher education are frequently viewed by Western instructors as persistent plagiarizers.” Russell Hunt (2002) suggests using “originality reports” by faculty as a tool to gain an insight into the size of the problem and understand their students’ gap in citing and referencing conventions required in the process of academic writing. Savage (2004) reports that evaluation of student and staff responses to the use of Turnitin indicates that both groups consider it to be a useful but limited tool for combating plagiarism. The survey finds that Turnitin is considered to be the most useful as a deterrent rather than a solution. Respondents advise faculty and staff to pursue other methods to reduce the plagiarism in higher education.
Faculty (e.g., Drew University, St. Norbet College, Kansas State University) have changed how writing is taught. Professors focus more on collaborating with students in their research process, taking them through the process of engaging in a few complex sources and exploring them with the students before assigning a research paper. McGowan (2005) introduces ‘genre’ analysis. This approach involves the students in actively developing an awareness of the typical structures and language patterns required in a particular discipline and for specific assignments.

Taylor (2003) describes a 10-point whole school strategy developed and adopted at Unley High School. He characterizes this collegial approach as a “good teaching practice” which requires little new learning and is centered on a greater understanding of the function of language. It focuses on “question setting, being explicit about skills, making student thinking visible, valuing process as well as the product, using one referencing system, considering linguistic evidence, knowing your students abilities, developing ethical intelligence, searching for “borrowings,” and discussing suspect pieces.” Bates and Poole (2003), Freedman (2004), and Born (n.d.) urge faculty to develop new approaches and assessment strategies so students apply the course material to their own lives. For example, Born (n.d.) compiles the following ten proactive approaches to reduce plagiarism: “treat a paper as a process not a product; assign group activities; design questions that require discussion rather than memorization; assign different questions to different individuals; give tests, quizzes or assignments more frequently; assign more in-class activities; don’t allow make-ups; rotate curriculum; build trust and educate students.”

Implications for Higher Education

Research has clearly shown that plagiarism is prevalent in higher education today. While institutions of higher education have used different methods to educate students regarding this issue, it has not helped stop the problem. Faculty, who are on the front line facing perpetrators of these crimes have to resort to tools like Turnitin to ensure that students turn in appropriately cited papers. While some of the faculty use the tool to check students’ work and ensure that submitted student work meets the standards for academic integrity, some also encourage students to use the tool as they work on papers. The latter group views a PDT as an additional tool for students to improve their research and writing skills, arguing that the student should learn to manage the writing process to produce work that is well-crafted and appropriately cited.

Instructors and administrators at institutions of higher education need to continue their efforts at educating students on the importance of acknowledging the contributions of others and presenting their own original work to meet excepted standards. Plagiarism detection tools like Turnitin offer members of the academic community a means to ensure that they do not violate norms of academic integrity. Whether students have access to such tools during the writing process so that they can adhere to expected standards or whether it is used as a means to check students’ submissions, use of such tools may contribute to reducing instances of plagiarism and driving awareness of this threat to true academic achievement.
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