Chapter 64

Policy and Issues in Deploying Automated Plagiarism Detection Systems in Academic Communities:
A Case Study of VeriGuide

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ABSTRACT

Plagiarism is becoming prevalent through the use of the Internet. Educational institutions are seeking technology to combat plagiarism. This chapter describes policy and issues encountered by an educational institution that deploys an automated plagiarism detection system. Background information of plagiarism and the benefits of using automated plagiarism detection systems are presented as motivation. A detailed account on the benefits of using automated plagiarism detection system in the academic setting is given. Associated policy issues (administrative issues, submission policy issues, disciplinary issues, copyright issues, security and privacy issues, and ethical issues) and resources needed to deploy such a system are discussed in details. VeriGuide, an automated plagiarism detection system designed and implemented at the Chinese University of Hong Kong, is presented as a case study on how the technology can be used to alleviate workload for the teachers and also provide a fair academic environment for the students. It is hoped that the case study would be helpful for those who are interested in using such a system to promote academic quality and integrity.

INTRODUCTION

Plagiarism refers to the dishonest act of taking credit for someone else's intellectual properties. It can appear in many forms, such as copying text, programming codes, images, and music (BBC news, 2010; Mcdonell, T. B., 2008; Tahaghoghi, S., 2008). In the case of academic writing, plagiarizing is copying or borrowing ideas without properly citing the source. It is sometimes possible that a person may not realize that he or she is plagiarizing when he or she does. Nevertheless, ignorance is never an excuse for plagiarism (Goodwin, D. K., 2002; Plotz, D., 2002). There are five types of plagiarism, namely copy and paste plagiarism, word switch plagiarism, style plagiarism, metaphor plagiarism, and idea plagiarism (Barnbaum, C., n.d.; Liles, J. A., & Rozalski, M. E., 2004). Copy and paste plagiarism involves cutting and pasting text from the Internet or electronic sources. Word switch plagiarism is similar to copy and paste plagiarism with the exception of changing a few words to evade detection. Style plagiarism copies the text by paraphrasing it. Metaphor plagiarism means copying the metaphors from the source article. Idea plagiarism is the failure to distinguish between public domain information and creative ideas in the source article. All five categories of academic plagiarism involve taking credit for ideas that belongs to somebody else by failing to give proper citations to the original authors.

Academic plagiarism is a growing problem all over the world. The vast amount of readily available resources in the Internet has made plagiarism easier. Even though the severity of the problem can be mitigated by moral education, it is foreseeable that the problem is here to stay. In the United States, a survey by Rutgers University (Beam, A., 2003) based on 18,000 college students, 2,600 faculty members, and 650 teaching assistants from 23 campuses suggests that 10% of students surveyed used the Internet to plagiarize in 2000; but the figure grew to 38% in 2003. Furthermore, almost 50% of students surveyed did not consider Internet plagiarism as cheating. In 2008, the student newspaper Varsity reported that: "49 per cent of Cambridge students have committed some form of plagiaristic act whilst at the University" (Stothard, M., 2008). Moreover, plagiarism is not exclusive to students. There are reported cases of faculty members copying from conference and journal papers (Kock, N., 1999; Smallwood, S., 2004; BBC news, 2008). The seriousness of the problem is augmented by students' lack of a proper concept of plagiarism. Some students think that plagiarism is either not wrong or wrong only if they are caught. This phenomenon was reported by BBC News (2006a). The open secret was publicly confirmed when some students admitted that they had searched the Internet for model essays or copied their friends' work (BBC news, 2006b).

The consequences of plagiarism are summarized as follows from different viewpoints (Dey, S. K., & Sobhan, M. A., 2006; Harris, R. A., 2001; Howard, R. M., 1999):

- **Student:** Widespread plagiarism deteriorates the learning attitudes of students and results in an unfair learning environment and scoring. The motivation to do the hard work of learning new knowledge will be weakened if students have the option to choose the easy way out by cheating. An environment that tolerates plagiarism is unfair to those students who are honest. Sooner or later, even the honest students will start plagiarizing in order to compete. The vicious circle continues.

- **Teacher:** In order to stop plagiarism, teachers have to spend extra time and energy to verify submitted work (Bjaaland, P. C., & Lederman, A., 1973). For example, they would invent counter-measures, such as requiring students to link the assignments with activities in the classroom (Satterwhite. R., & Gerein,. M., 2001) or using obscured topics in student assignments. The problem worsens when the

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