

# Checking Originality and Preventing Plagiarism

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## ABSTRACT

Concerns about plagiarism are widespread through academia as students become more proficient at exploiting the electronic resources made available through the world wide web. Most academic institutions

explain the importance of giving proper credit for the work of others, but are increasingly turning to plagiarism detection software as an enforcement tool.

In 2002 the author was part of an international working group which wrote a report on the issue, covering such issues as prevalence of plagiarism, processes for plagiarism detection and prevention, staff attitudes and institutional policies. For three semesters he has been using turnitin.com to “check originality”. Among the aspects discussed in this paper are logistical issues, staff concerns about the principles and the processes involved in plagiarism detection, and student reactions.

## Keywords

Plagiarism, detection, prevention, attitudes, policies.

## 1. INTRODUCTION

Morrison (2001) conducted a comparison of three on-line plagiarism detection services and two stand-alone software applications and decided to adopt turnitin.com (see also Culwin and Lancaster, 2001 and Grover, 2003). Having accidentally discovered some cases of plagiarism and then heard Morrison’s presentation, the author conducted an experiment during 2002, submitting student assignments for one UNITEC Master of Computing (MComp) course to the

turnitin.com website for “originality checking” (a more positive term than “plagiarism detection”). He found that, after it was made known that seven students scored zero for their first assignment because of inclusion of unattributed material from other authors, no such problems occurred with the second or third assignments. He also used turnitin.com to help other lecturers check assignments that they had concerns about.

Late in 2002, the UK universities evaluated a variety of plagiarism detectors and decided to standardise on turnitin.com, and the staff teaching on UNITEC’s MComp programme decided to do likewise. During semester 1, 2003 more than 70 MComp students are submitting nearly all their assignments to turnitin.com. Experiences to date are described below and a full analysis of the results will be reported at the conference.

## 2. LOGISTICAL ISSUES

Turnitin.com compares the text of submitted assignments to its database of previous submissions and a wide selection of websites (more than Google, they claim). If it finds a match it highlights the matching text and, in the case of websites, it will display the source if the user clicks on highlighted text. The user can then check the assignment to see if there was a reference in the text and if quotation marks or indenting were used.

This semester the masters students are required to submit their own assignments to turnitin.com in order to minimise lecturer workloads. A research assistant

was employed to set up the 11 courses and 30 assignments on turnitin.com and will be used next semester to skim the expected 1000 “originality reports” (four bachelor’s classes with large enrolments will be added to the masters classes). An experienced skimmer can process an average assignment in a minute, spending very little time on an assignment which has little highlighted content, rather more on those with a lot highlighted. Suspicious cases are then referred to the lecturer.

At UNITEC, allegations of plagiarism are dealt with by the appropriate programme director, with the usual penalty on a first offence being zero marks for the assignment. Repeat offences may lead to the student appearing in front of the faculty discipline committee, who usually suspend the student for one or two semesters. However, there have been very few repeat offenders in the masters programme. Most of those detected had been careless or were unused to the academic conventions followed in New Zealand tertiary institutions. Cultural factors may also have played a part (see, for example, Lupton, Chapman and Weiss, 2000).

### 3. STAFF CONCERNS

Some staff are concerned that the use of turnitin.com will engender “an atmosphere of distrust”, but the great majority are more concerned that the reputation of UNITEC and the particular programme will be adversely affected if plagiarism is rife. There are fears that students will try to “beat the system” by altering wording and/or sequence, but most welcome a process that relies on electronic pattern recognition, rather than human eyes and memories. The support offered by the programme director and research assistant has largely alleviated concerns about workload.

A recent “epidemic of plagiarism” by students on the bachelor’s degree programme has led staff to ask if spare capacity in the school’s turnitin.com account could be used on a selection of bachelor’s courses. Initially four courses have been selected: the first semester (compulsory) professional skills course, a second semester (optional) internet and website development course, one of the two compulsory courses at second year, and the compulsory project at third year. Some third year students, on being apprehended, have said “we have never been challenged before”, so staff are determined to start spreading the message from the beginning of the bachelor’s programme.

Staff in other schools and faculties have heard about the MComp experience and been encouraged to follow

suit. The Associate Dean of Business is investigating the costs of obtaining a faculty-wide licence. The author is a member of a recently established institute-wide working party to investigate “student academic misconduct” with a particular emphasis on plagiarism.

The document setting up the working party (Pryor, 2003) begins:

*Given increasing concerns about academic misconduct at UNITEC, the Academic Development Unit wishes to establish a short-term working party to consider the issue. The potential for academic misconduct, particularly plagiarism, has increased with the availability of the internet and other technological gadgets as well as opportunity to now purchase ‘essays-to-go’.*

It continues:

*The relevant provisions in the Academic Statute need to be reviewed and revised as appropriate, to ensure that the definition of, and process for dealing with academic misconduct are clear and consistent across UNITEC. Furthermore, supplementary information and training may need to be provided for staff, and further technological resources such as the website ‘turnitin.com’ (used to detect plagiarism) may need to be utilised in this area throughout UNITEC.*

A report on the working party’s deliberations will be presented at the conference.

### 4. STUDENT REACTIONS

Some students have struggled with the submission process, but most have adjusted well (they used to have to submit electronic copies to Blackboard). In discussions with the degree monitor, with staff and with student representatives, most students support the concepts of “a level playing field” (all students having to meet the same standards) and “upholding the reputation of the degree”.

Two students have withdrawn from the MComp programme after scoring zero for their first assignments. A few students have argued about the plagiarism, but only one persevered after being shown the evidence on-screen “in glorious technicolour” (Joyce, 2002). Often students claim that they “forgot to include the reference”, so the programme director advises all students at the orientation session (and in the first compulsory course) to italicise all material that they have copied from another source. Before they remove the italics and submit the assignment, they should check that each italicised section has a reference.

## 5. INTERNATIONAL PERSPECTIVE

In 2002 the Special Interest Group for Computer Science Education (SIGCSE) of the Association for Computing Machinery established an international working party (including the author) to investigate "student cheating". Their as yet unpublished report (Dick et al., in press) has 25 references and quotes surveys indicating that 54% to 95% of students, in different tertiary education environments across four countries and spanning 40 years, have admitted cheating. They noted that cheating can cause harm at many levels: to students, their class mates, the programme, the institution, and society at large.

The abstract of their report reads as follows:

*The paper examines the issues of cheating amongst university students as perceived by academics in the information technology field at a number of institutions in the UK, USA, New Zealand and Australia. It presents a framework that can be used by academics to manage cheating and provides academics with a range of practices that they can use to reduce, detect and respond to cheating in their courses and institutions. It presents four recommendations for academics: 1. that academics need to become aware of the likelihood that students are cheating in their courses, 2. that academics need to improve the culture of their institution to make cheating unacceptable, 3. that assessment should be designed to reduce or prevent cheating and 4. that academics should focus on pre-empting cheating in preference to focusing on the detection of cheating.*

These recommendations will be welcomed by many academics, and their implementation can be greatly assisted by the use of "originality checkers" to help educate the students about what is acceptable practice in the academic world.

## 6. CONCLUSIONS

The author of the present paper has worked on implementing all four of the SIGCSE recommendations within his own school. Plagiarism and its detection/reduction have been discussed at length in several staff meetings. The issues have been addressed with students at orientation sessions and within selected courses of all programmes. Assessments have been reviewed to reduce the likelihood of cheating.

First signs are encouraging. Staff and students show heightened awareness of the issues. Detection rates appear to be dropping in later assignments and

courses. Students are using the free trial (five submissions) offered by turnitin.com to conduct their own originality checks before submitting their assignments. No student has had to appear before the faculty discipline committee. It seems that the school's policy of combining education with efficient detection systems and rigorous disciplinary processes may be paying off.

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