Cheating and electronic plagiarism – scope, consequences and detection

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Abstract

Plagiarism is….*"the appropriation or imitation of another's ideas and manner of expressing them, as in art, literature, etc., to be passed off as one's own",* [Macquarie Dictionary]. It comes from the Latin *Plagiarius*, a kidnapper.

This paper discusses the scope of cheating, and plagiarism from electronic sources including the Internet, online databases and journals, peer essays and assignments, and e-books. It examines the types of cheating and plagiarism and the issues associated with the increasing levels of plagiarism including the ways in which students collaborate, retrieve and use information.

The consequences of cheating and plagiarism on the quality of the educational experience (for the student) and educational standards (for the institution) will be examined.

Detection of electronic cheating, including plagiarism, is now possible using a range of products, both Australian and international. The products will be discussed, including how they identify occurrences of copied text and how they report their findings. The findings of the CAVAL/ALDIS Plagiarism Detection Pilot Project conducted across 6 Victorian universities in 2002 will be examined in conjunction with the earlier findings of international studies such as that conducted by JISC in the UK.

The paper will conclude by examining the post-study implications for Australian institutions along with the implementation issues that exist at many levels within those institutions

Background

It is difficult to escape the conclusion that the recent public controversies about plagiarism and cheating have been inextricably linked to the invasive and extensive nature of the Internet. Plagiarism has always been with the educational and publishing world. Its detection has been totally dependent on the knowledge and breadth of reading of the academic or publisher. It has been only through the awareness of their discipline literature that detection became possible. It was also more difficult at the "user" end of the plagiarism exercise as any words that were to be plagiarised had to be transcribed manually word by word. Perhaps there was an extensive amount of plagiarism occurring but there was little awareness of this, until very recent years.

It was the contention of the French philosopher and mathematician Blaise Pascal that 'mutual cheating is the foundation of society'. There have been very public instances of plagiarism involving prominent academics such as Doris Kearns Goodwin and Stephen Ambrose. Indeed our own art critic in exile Robert Hughes settled on a plagiarism case claiming that he had been afflicted with a photographic memory since childhood. It would be a very serious mistake for any university in this country to believe that they are immune from this problem. That they chose to keep their heads down and hope that it goes away is not a measure of their immunity rather of an intellectual dishonesty. The more powerful positions are taken by those institutions which choose to publicly examine the issue and reveal the results. It is the contention of this paper that, even with the extensive amounts of plagiarism that have been detected of late, the public outcries are more about quality of educational product than outrage about cheating. This is a fundamental difference of outlook. It is also a fundamental difference in how universities ought to be responding to the scourge. Universities will only invest resources into educational programs and other remedial programs if they believe there is a significant rationale. That rationale is bound in the value of their degrees, diplomas and courses. If they are being degraded in the eyes of their potential market then action will follow. Major universities in Melbourne and in Perth have experienced being on the front page of the New Straits Times for up to 10 days in a row because of accusations of cheating amongst the student population. This is the last place the universities wish to be. The adverse press coverage is also a measure of how importantly the Asian market regards the quality of the educational programs, and Australian educational programs particularly.

The recent run of press coverage in Australia has, for the most part, been focused on accountability of the universities to achieve an even environment for all students. The coverage in the American press has been more focused on the moral aspects of cheating. It is often the contention of this press that the main reason for this rise in cheating is the national decline in personal integrity. Irrespective of the focus there has been a good deal more attention and detection of plagiarism in the past year or so.

What is plagiarism?

Plagiarism is…."the appropriation or imitation of another's ideas and manner of expressing them, as in art, literature, etc., to be passed off as one's own", [Macquarie Dictionary]. It comes from the

Latin *Plagiarius*, a kidnapper. "Plagiarism is a ugly word for an ugly deed…..To accuse someone of plagiarism is to accuse them of something quite monstrous….Yet the word is flung around all the time these days, with little regard for what it actually means."[1]   Sullivan goes on to argue that we need solid evidence before we accuse people and greatly affect their reputations. Most universities have created their own definition of what Plagiarism is and they are invariably prominent on the institution's web site.

"…a form of cheating in assessment…It is the presentation of the work, idea or creation of another person, without appropriate referencing, as though it is your own. Plagiarism is not acceptable…"   extract from RMIT's Plagiarism Statement

"…the copying of another person's ideas or expressions without appropriate acknowledgement and presenting these ideas or forms of expression as your own…"   extract from Deakin University's Plagiarism Statement

Institutions regard plagiarism in the most serious fashion as a form of cheating, of presenting work as one's own with attribution. This is relatively clear. The detection of incidences of plagiarism will lead to some form of disciplinary process and this is where it can become less clear and more judgmental. Disciplinary processes have also become legalistic and time-consuming for the academic responsible for the relevant subject in which the plagiarism has been detected. The detection of copying from peer essays or from web sites will need to be carefully thought through before classes are submitted for electronic detection. Is a 5% detection from a web site as serious as a 5% detection from a peer essay? Would two unattributed extracts from the web result in an automatic exclusion from that assignment or from the subject altogether?

The understanding and interpretation of plagiarism across a campus, across a range of disciplines varies significantly so it is critically important to plan well in advance and to document practices and interpretations. In this exercise much can be gained from collaborative work amongst universities. Individual practice in each university can be richly informed by the insights and practices at other universities. It does not lead to uniform practice nut rather informed and better practice. In this both the academics, administrators and students gain as does the quality of the educational qualifications.

Studies of cheating

Most of the studies in recent years have been based on self-reporting. Students have been asked whether they have engaged in cheating and if so to what extent. This behaviour is strongly evident amongst groups or cohorts of students working or living together. "Academic dishonesty has traditionally been defined as the act of giving or receiving unauthorized assistance in an

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[1] Jane Sullivan (2003) "Plagiarism hysteria lacks originality" <u>The Age</u> 19 December: 13.

academic task or receiving credit for plagiarised work". [2] A study in 1993 indicated that cheating in American colleges had doubled sine the 1960's. [3] Scanlon was reported as finding in his self-reporting study of 698 undergraduates form 8 universities in the United States that only a "substantial minority" were appropriating material from the internet. This percentage, he revealed, was "typically in the 25% range". "The new is not as bad as the some in the media would have it, but the numbers are still troubling."[4]

A study in Melbourne of 700 students from the Monash University and the Swinburne University of technology[5] were surveyed about their attitudes toward and actual practices of plagiarism. Almost 80% of the students surveyed admitted some form of cheating. This self-reporting study also found that 54% of post-graduates admitted to cheating. Self-reporting studies have their difficulties in necessarily accepting what students report and their motivations to do so. Cheating studies are subject to a number of methodological flaws in that they are reliant on the honesty of the respondents. They are also dependent on the respondents' interpretation of what certain behaviours mean and the extent of their 'dishonesty'. "It would be a mistake", declares the Editorial in The Age ," to label four out of five students as blatant cheats: the surveys catch-all definitions of cheating ranged from the trivial to the egregious. Yet there is clearly a cancer of dishonesty that threatens to eat away at the credibility of degrees and erode the foundation of trust on which scholarship stands".[6]

The excellent Australian study by Helen Marsden[7] was also conducted in 2002 and present a compelling view of cheating behaviours from a psychological viewpoint. She found that over half of her sample (from 4 universities in Australia) had cheated on some occasion. They were mostly young and post first year students. They were more likely to be male than female. There was no significant difference between cheating and achieved grade average. Significantly she found that those with a High Learning Orientation had low levels of cheating while those with a High Grade Orientation could be found with a greater propensity to cheat and plagiarise. This study provides some much needed insight into unacceptable behaviours in academic study.

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[2] Kibler, W L (1988) "Academic integrity and student development" Asheville, NC: College Administration.

[3] Carroll, Diane (2002) "Academic cheating is on the rise" Tribune News Service. February 15:2

[4] "Internet Plagiarism-is everyone doing it? (2002) Ascribe Higher Education News Service Jan 29:NA

[5] Jile Szego (2003) "Shock finding on uni cheating" The Age Jan 7:1

[6] "A creeping tolerance of degrees of cheating" (2003) The Age, 10 January:10.

[7] Helen Marsden (2001) "Who cheats at university? : The contribution of demographic, situational and personality factors to dishonest behaviours." A report submitted in partial fulfilment of the requirements for the degree of Honours in Applied Psychology at the University of Canberra October.

A study by Gaines and Braumoeller tested the effect of Plagiarism software versus no software.[8] These two teachers were teaching the same course and decided to give one half of the class strong warnings not to cheat while the other group was given virtually no warning. The papers were run through plagiarism detection software and equal amounts of cheating were found. This was recorded at 12%.

Studies of assessments

A major study was conducted by the Joint Information Systems Committee into the effects of the electronic on student assessments. A series of reports were produced (http://www.jiscpas.ac.uk/) and a National Plagiarism Service was established using Turnitin software across the United Kingdom. No data from the study of student essays was released.

In January 2002 a study of 1925 essays was commenced across a range of 20 subjects in 6 Universities in Victoria.[9] These essays were submitted into the Turnitin electronic plagiarism detection system to determine instances of unattributed passages within the essays. Most of the essays were in paper format and were therefore scanned into OCR readable format. Just over 20% were available in digital form. Only one of the 1925 essays was handwritten.

Turnitin has a colour-coded scheme to present the various levels of non-attribution. Red indicates that 75% or more was found from another site on the internet. Yellow indicated 50% and so on. The report details the results of the study in some detail. The broad results indicate that close on 14% of student essays contained an unacceptable level of unattributed materials. The sourced materials would have been from the internet or from peer essays. Certainly both occurred in fairly equal instances. The volume of copying from the internet was far more impressive. One student had copied over 90% of the essay from the internet in 5 large chunks of data and had only written a paragraph in the form of a conclusion. The Turnitin software highlights any material, passages or strings of 6 words or more which are found to have been matched from any of the 2.6 billion pages of publicly available internet. The system is unable to determine whether the passages have been attributed or not. This is essentially because there are quite a number of means by which attribution is acknowledged. The results of the study have therefore been checked and were based on unattributed text. Turnitin are now commencing to add commercially available journal literature to the databases to be searched. This will swiftly develop as other publishers come into this mode of action. The other facet of this, from a publisher's perspective, is that they wish to check manuscripts prior to publishing for originality. Quite a number of instances of plagiarist behaviour have been detected in the journal literature, some involving sizeable financial penalties for errant publishers.

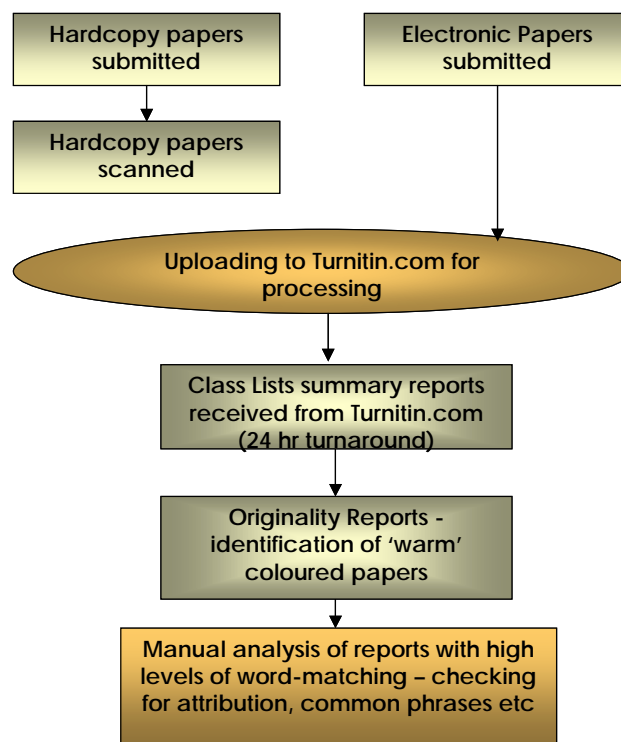
[8] "Software discourages cheating, but heavy cost to teachers" (2002) Education Technology News, June 5, v 19 n 12: NA
[9] Report of electronic Plagiarism Detection Project: conducted for the VVCC.(2002) Bundoora, Caval Collaborative Solutions.

Over 70% of the subjects were affected by unacceptable levels of non-attributed text and there was not a single university unaffected. It can be inferred from this that most universities will have sizable amounts of plagiarism occurring in their subjects using electronic means to download text from the internet. It is suspected that this is the tip of the iceberg in that any copying from textbooks is, at this time, unable to be detected unless two students have copied the same text in the same cohort in which case it would be detected as peer copying.

The diagram below describes the process by which the Caval project was carried out.

Figure 1

Hardcopy papers submitted	Electronic Papers submitted

| Hardcopy papers scanned | |

Uploading to Turnitin.com for processing

Class Lists summary reports received from Turnitin.com (24 hr turnaround)

Originality Reports - identification of 'warm' coloured papers

Manual analysis of reports with high levels of word-matching – checking for attribution, common phrases etc

Future

The recent Australian census data reveals an interesting aspect of this issue which has implications for the future.

Table 1

Age	Uses a computer at home	Doesn't use a computer at home
0-9	854,668 (33.17%)	1,584,885
10-14	921,952 (68.97%)	368,057
15-19	886,548 (66.89%)	392,395
20-24	616,195 (49.64%)	575,145
25-34	1,271,394 (46.68%)	1,349,791

The students coming into the educational system at High School or University level will increasingly have long and strong experience on the internet. They will have had years of experience in accessing and using the publicly available materials on the net. Currently, it is estimated that there are 2.5billion pages of publicly available internet. It is also estimated that there would be almost double that figure behind various firewalls.   Services such as Turnitin are now building alliances with publishers who will have their journal content included in the pages to be searched using Turnitin's plagiarism detection software. The advantage to the publisher is two-fold: firstly, it enable them to take the high moral ground assuring educational authorities that they do not wish their material to be used inappropriately. Secondly, they are wishing to assure themselves that the manuscripts they are receiving are original. A major publisher was recently subject to a US$60,000 payout to another publisher for an article which had been previously published and copied totally without acknowledgment.

The future is, as always, uncertain. But there are clear trends which may never be realised but need addressing.