STUDENT PLAGIARISM AND CHEATING IN AN IT AGE

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Abstract: The paper discusses the issues of students engaging in academic impropriety, especially in an environment of high computer usage. Additionally, the paper presents work on the development of a self report scale to measure student attitudes toward and engagement in a range of academic practices, together with individual difference variables (such as trait procrastination). The objective of the scale is to yield data on the prevalence of different academic practices with a view to assisting students to develop as members of the academic community.
Keywords: Cheating, Internet, plagiarism, students.

INTRODUCTION

Plagiarism, and other forms of academic impropriety, are areas of growing importance in John Moores University (LJMU) and indeed Nationally & Internationally. The present study forms part of a large-scale survey aiming to address the prevalence of different forms of academic practice in UK university students, differences between academic disciplines (quantitative and qualitative), and the attitudes that may underpin such practices. The present article addresses student's views regarding the acceptability of a range of academic practices and self reported experience of such practices. The current sample includes 91 students from a range of Engineering programmes and 80 students from a range of Psychology programmes.

There is a growing body of evidence that University students do 'cheat', that is, engage in academic practices considered unacceptable by the University and the wider academic community [1]. There is also considerable belief (for example, [2]), combined with empirical evidence that such cheating is on the increase [3][4]. Estimates of the proportion of University students who self report engaging in inappropriate academic activities varies in the literature, as might be expected given differences in measurement tools employed and populations surveyed. Generally, however, estimates are higher than many academics might expect on the basis of their personal experience. Park [1] reports data from 6000 US students, indicating between 63% and 87% (depending on academic discipline) admitted having cheated during their college career. Franklyn-Stokes & Newstead [5] surveyed a sample of UK undergraduates. Self reported rates of academic impropriety varied from 54% of students admitting having made up references to 72% admitting to having copied coursework.

Personal experience in the hearing of cases of alleged plagiarism and the academic literature suggest that to some extent academic staff and students do not share the same conceptualisations of cheating. The more obvious and extreme forms of academic impropriety will be conceptualised as cheating by staff and students alike. Other unacceptable practices, however, may be regarded by students as not cheating and not particularly serious. Park [1], for example, reported work by others indicating that students clearly differentiate between, "*cheating on exams ('blatant' cheating) and other forms of academic cheating (often viewed as less serious or 'not really' cheating)*". Roig [6] examined the capacity of 316 American undergraduates to correctly differentiate plagiarized and correctly paraphrased versions of the same text. Six out of eight plagiarized versions were deemed correctly paraphrased by approximately 50% of participants. In both this study and a follow up study, mere mention of the original authors name appeared to be the key criteria in determining whether plagiarism was seen to have taken place. It is important to have an accurate definition of cheating, and in particular

plagiarism, as much of the reason for the increase in academic impropriety has been attributed to uncertainty over what does and does not constitute plagiarism. However, plagiarism is still plagiarism even if it was unintended. Table 1 lists actions considered to be academic impropriety in UK universities.

Students themselves believe that those who cheat in academia are more likely to cheat in other contexts. Morgan & Foster [7], in a survey of 149 undergraduates in the US, for example, found that 87% of students thought that those who 'routinely' cheat in education will repeat such behaviour to the workplace. The most common reason cited for this was simply habit. Were such beliefs to be substantiated, the implications for courses such as Engineering & Psychology would be great because the first degree opens up pathways for subsequent professional qualification.

Table 1 Practices Deemed to Constitute Cheating

Plagiarism: *A student incorporates another person's or body's work by unacknowledged quotation, paraphrase, imitation or other device in any work submitted for assessment in a way that suggests that it is the student's original work*
Collusion: *The collaboration without official approval between two or more students (or between student[s] and another person[s]) in the presentation of work which is submitted as the work of a single student; or where a student(s) allows or permits their work to be incorporated in, or represented as, the work of another student.*
Falsification: *Where the content of any assessed work has been invented or falsely presented by the student as their own work.*
Replication: *Where a student submits the same or similar piece of work on more than one occasion for assessment to gain academic credit.*
Taking unauthorized notes or devices into an examination.
Obtaining an unauthorized copy of an examination paper.
Communicating, or trying to communicate, with another student during an examination.
Being a party to impersonation in relation to an examination.

IMPACT OF IT AND THE INTERNET

Numerous authors have addressed the issue of the Internet in the context of presenting students with increased opportunities for cheating [8], possibly combined with perceived decreased risk of detection. In discussing student plagiarism of Internet sources, however, Wood [9] proposes an alternate view - that student experiences with electronic media in particular may lead them to develop attitudes towards the ownership of academic work that are different from established wisdom and at variance with the conventions of academic writing. This perspective, therefore, considers some plagiarism at least might not be 'cheating' in the eyes of students. Plagiarism is fundamentally not illegal, however it is ethically wrong.

Over the last few years, there has been an increase in the concern of academics over the amount of academic impropriety undertaken by students, and the number of plagiarism cases in particular. This concern has coincided with the proliferation in the use of the Internet as a tool for academic study and research. McCabe [10] noted "*there is evidence that cheating has increased in the last few decades, and the Internet is likely to intensify the problem*". In practice, plagiarism is much easier with the Internet as a medium, rather than printed material, after all actions such as '*copy and paste*' are much easier from an electronic source than from a textbook. It could be argued that as the offence becomes easier to perform, then perpetrators feel less connected with the crime.

The Internet has helped in the development of paper mills (also known as paper banks) which operate in a variety of ways: some contain pre-written essays on a wide

range of topics that can be purchased, while others will write an essay specifically for the customer. Students are aware that they do not have to resort to 'paper mills' to locate material to copy and paste into their own work: some academic institutions are also party to the spread of plagiarism– albeit unknowingly – with their provision of both lecturer material and student work on University web-sites.

QUESTIONNAIRE METHOD

Data was gathered using a questionnaire specifically authored for the study. The questionnaire invited students to self report a range of different academic practices. The questions were generated from the existing literature on academic impropriety and from the authors' personal experiences and beliefs about academic practices in their own domains. Trait procrastination was measured using Lay's Procrastination Scale for Students [11] (reproduced with permission via personal communication). This scale has been shown to have adequate reliability and validity**.** Rosenberg's Self Esteem scale was employed [12]. This scale has established reliability and validity. The participants in this study were 171 students at LJMU, drawn from within Engineering and Psychology programmes. Owing to the manner in which questionnaires were distributed, it is not possible to calculate a response rate. Questionnaires were distributed to students in lectures by the authors and colleagues within the two Schools. Participation was entirely anonymous and voluntary and no incentives were offered to students.

QUESTIONNAIRE RESULTS

Table 2 illustrates the frequency of self reported experience of the nine top ranked forms of academic impropriety. Figures represent the percentage of respondents reporting having engaged in the practice listed on at least one occasion: related to the production of coursework assignments or projects. The table also illustrates frequency data for student attitudes towards the main forms of academic impropriety. Figures represent the percentage of respondents rating each practice listed as either unacceptable or highly unacceptable. The table indicates some tendency for a negative relationship between acceptability of, and engagement in individual acts of academic impropriety. The results obtained are not as high as other reports, however they are still a cause of concern.

Table 2 Academic Impropriety: Self-reported experience and Student Attitudes in relation to Coursework

Item	Self-Reported Frequency (%)	Student Attitudes (%)
Making up some data for a research project	38.0	53.8
Failing to cite references you have consulted	36.8	54.3
Copying some sentences out of a text book into an assignment without crediting the source	34.5	60.8
Citing references you have not consulted	25.7	62.6
Making up references to make an assignment look more impressive	21.7	58.5
Copying from a friend's coursework assignment	21.6	76.0
Cutting and pasting material from a website into an assignment without crediting the source	19.9	74.8
Copying some sentences out of a journal article into an assignment without crediting the source	16.4	64.9
Cutting and pasting material from an electronic journal into an assignment without crediting the source	14.7	69.6

APPROACHES TO DETECTION

In the UK the Joint Information Systems Committee (JISC) recently produced a set of guidelines on "Deterring, Detecting and Dealing with Student Plagiarism" [13]. In it the authors recommend that detection become plays a part in an institution's strategy, and recommends the electronic detection service Turnitin.com, which can compare submitted assignments with a database of some 5 billion web pages and returns an originality report. Over 200 universities and colleges are currently using the service. The JISC report suggests that plagiarism may be more frequent amongst students in large classes and those undertaking distance learning programmes. Students who plagiarise are often poor at time-management; this implies that attempts at plagiarism may be poorly conducted thus making identification a little easier.

The Internet is not necessarily just a tool for cheating students, academics can utilise its power to make plagiarism detection easier. Powerful search tools and specialised detection services that allow keyword or phrase searching across millions of documents, permits academics to target suspect material. Furthermore, the proliferation of identical material on the web provides a greater opportunity to locate original material. Some of the approaches to detection that can be used include:

- Using generally available search engines (e.g. www.google.com) or metasearch engines (www.metacrawler.com). Although these are considered by many as the only tools needed, they do have some considerable drawbacks. They are not foolproof, since students may pick-and-mix their sources, it is time consuming and may take multiple searches, and it is not necessarily accurate. Finally, even powerful search engines such as Google, can only search a small proportion of the whole web: the content of database and password protected sites remain hidden.
- Analysis of structure and content of document by comparing with a central database (such as, www.turnitin.com).
- Writing Style Analysis (e.g. www.plagiarism.com), which is based on each individual having their own writing style.
- Computer program detection (e.g. www.cs.berkeley.edu) which compares programs within a cohort.
- Collusion detection (e.g. www.copycatchgold.com) looks for copying across a cohort.

There are many limitations of web based detection services, for example they can only identify material copied from the web. It cannot identify if the student has paid for someone to write the work for them. Also, it can report plagiarism when in fact the student has included material with correct citation conventions used.

APPROACHES TO PREVENTION

As part of the questionnaire, students provided their views on plagiarism in general. Table 3 details some of their responses. It is interesting to note that some 22% expect academics not to investigate suspected plagiarism, and that 43% think that most cases of plagiarism are not identified. To the authors, the most worrying results was that more than 98% of students think that academics do not know where to look on the web for plagiarised material. It is these attitudes and perspectives that academics must try to alter. The process of deterring cheating will always be far more effective than the act of detecting the cheating, additionally the staff time and effort expended in informing students of correct academic practice is significantly lower than that needed to identify and pursue cheating students.

Institutions have to be seen to be taking the issue of cheating seriously. At Institute level, there needs to be a review of the policy on academic honesty, linked to definitions of academic impropriety. There also needs to be a clear set of penalties which are designed to discourage involvement in dishonest practice, similarly academics need to be encouraged to follow through suspected transgressions from acceptable practice and supported in the application of the penalty system. Ideally, there should be administrative support to assist academics in the identification of possible sources of material in suspected cases. From the academic side, lecturers need to set a good example by using all the correct citation methods at all times.

When producing assignments, academics need to be more aware of electronic resources available to students, and structure the questions to allow students the opportunity to locate, retrieve and interpret information rather than requiring a regurgitation of the material. Assignments that that require higher order thinking skills are less likely to encourage cheating. In light of student perception, academics should produce assignments that vary from year to year, and that are 'unique'.

From the student perspective, they should be taught the correct skills and approaches to referencing, paraphrasing, working with each other and so on. Since procrastination has a link to engagement in academic impropriety, programmes should provide students with guidance and support to develop students' time management skills. One approach is to inform students about plagiarism, and how to avoid it: Table 4 list Internet sites that can be shown to students, such as ones that provide advice on plagiarism, and ones that are used for detection – if students are aware of the methods that can be employed to catch them, then they may be deterred from engaging in such practices. Finally, students have to be made aware of the penalties for academic impropriety.

Table 3 Student Views on Practices

Item	Students who Agree (%)	Students who Disagree (%)
Tutors are not willing to check sources to establish plagiarism	22.6	77.4
Most plagiarism goes undetected	43.7	56.3
It is acceptable to 'recycle' work if tutors cannot be bothered to update assignments	48.4	51.6
Tutors know how to identify Internet sites used by students	1.3	98.7
Material on the Internet is open access and so you do not have to credit the source	17.1	82.9

Table 4 Internet Sites on Plagiarism

Plagiarism Advice Sites	
PlagiServe	www.plagiserve.com
Digital Integrity	www.findsame.com
Write It In Your Own Words	owl.english.purdue.edu/Files/30.htm
Avoiding Plagiarism	sja.ucdavis.edu/sja/plagiarism.html
Plagiarism Assistance	
Essayworld.com: Thousands of free essays written by and for students	www.essayworld.com
Cyber Essays: Free Papers, essays and reports	cyberessays.com
Cheating Page	www.users.cloud9.net/~insanity/cheatingpage.html
Termpapers: Providing 30,000 term papers, academic paper research assistance, expert custom paper research	www.termpaperassistance.com

DISCUSSION

Naturally, if a University identifies that significant proportions of students are engaged in inappropriate academic practices, there is an onus for the University to do something to address that. Hence, the University might strengthen efforts to detect such practices and/or increase the penalties levied on those who are detected. It is not an unreasonable proposition that students who engage in deception in academic work might also do so in other arenas.

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