

Plagiarism and Poor Academic Practice – A Threat to the Extension of e-Learning in Higher Education?

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Abstract: Concern has recently increased in the British higher education system that the incidences of plagiarism (the passing of someone else's work as though it were one's own) may be rapidly increasing. After an examination of the prevalence of plagiarism and some of the reasons advanced for its increase, the paper examines some solutions which are typically advocated. The implications for e-Learning and on-line learning cultures will be assessed.

Keywords: plagiarism, cheating, poor academic practice, academic dishonesty, higher education

1. Introduction

British higher education has embraced the benefits of internet technologies, and particularly internet access with great enthusiasm and it is undoubtedly the case that the typical student now has access to a range of sources that would have been unimaginable only a decade before. Concomitant with increasing accessibility however have been the possibilities for *plagiarism* (the passing off as other people's work as one's own). Before the mid-1990's examples of plagiarism appeared to be comparatively rare but the recent massification of higher education, observable as a world-wide phenomenon, has raised concerns in the academic community that plagiarism may now be a serious and endemic problem.

1.1 Prevalence of plagiarism

Before attempting to discuss the incidence of plagiarism, it is necessary to clarify meanings implicit in the term. The essential points appear to be, following Carroll (2002) that *someone else's work* should be *passed off*, either *intentionally* or *unintentionally* as one's own in order to *gain some benefit*. There are other types of illegitimate activity within the student community which may or not involve plagiarism but is often confused with it. We can cite, for example, collusion between students to produce work which was intended to be individual, the breaking of copyright and outright cheating (such as the consultation of illegitimate material in an examination).

Estimates of the prevalence of plagiarism may therefore, to some extent, be contingent upon the definitions employed. The data drawn from

a variety of sources does tend to indicate that no system of higher education is immune.

1.1.1 United States

Studies of cheating behaviour in the United States date from as far back as the 1940's as a study by Drake (1941) reported that 23% students admitted some form of cheating behaviour. This could indicate that such forms of academic misbehaviour be characterised as endemic. A classic study by Bowers (1964) reported that three quarters of a sample of 5000 students drawn from a sample of 99 colleges and universities in 1964 reported involvement in some degree of academic dishonesty. Thirty years later, a replicating study that included nine of the original colleges confirmed a modest increase in this proportion (McCabe, Trevino, and Butterfield, 2001). A more recent estimate has even claimed a figure as high as 90% in American high school students (Jensen, Arnett, Feldman and Cauffman, 2002) although other studies reported in Davis, Grover, Becker and McGregor (1992) indicate lower rates than this.

One needs to be aware, of course, as Caruana, Ramaseshan and Ewing (2000) point out, that plagiarism may be only weakly associated with cheating behaviour. Plagiarism itself, following Howard (2000) may range from fraud (most serious), non-attribution of sources through lack of knowledge of the conventions through to 'patch-writing'. The latter is often given the attribution of 'poor academic practice' and whilst, not legitimate, may not attract a full charge of plagiarism in many university systems.

Satterthwaite (2003) indicates that plagiarism rates in the US are an estimated 30% but without citing any particular evidence to substantiate this view.

1.1.2 United Kingdom

Originally derived from American work on the subject, Franklyn-Stokes and Newstead (1995) and Newstead *et al.* (1996) have attempted to ascertain the frequencies of a range of non-academic practices. Students were asked to report whether they had engaged in a range of behaviour at least once in the previous academic year:

| Behaviour | Percentage reporting behaviour |
|---|--------------------------------|
| Paraphrasing material from another source without acknowledging the author | 54 |
| Inventing data | 48 |
| Allowing coursework to be copied by another student | 46 |
| Copying material for coursework from a book or other publication without acknowledging the source | 42 |
| Copying another student's coursework with their knowledge | 36 |
| Doing another student's coursework for them | 16 |
| Copying from a neighbour during an exam without them realising | 13 |

Source: Newstead, Franklyn-Stokes and Armstead (1996)

These frequencies are based upon 943 students at one university studying 19 disciplines. There are interesting variations contained within the data as men are more likely than women and mature students less likely to cheat. Although the evidence is not systematic, it appears that cheating behaviours are more common amongst first year students. Cheating of all kinds is more likely to be reported in students studying science and technology (in which *inventing data* is related to the subject matter of the disciplines) and less likely in professional areas such as health, social work and the humanities (although a gender bias may well be at work here).

Some detailed studies have been performed in individual disciplines in the UK. In a study of academic dishonesty amongst students at two pharmacy schools, Aggarwal, Bates, Davies and Khan (2002) report that 91% (268/292) in one pharmacy school and 80% (148/184) in another school admitted to taking part in at least one incident of various scenarios reflecting academic dishonesty. The median number of admitted instances was 4 for male students and 3 for female students. Borrowing

and copying coursework was considered dishonest by 88% (419/475) with 6% (28/471) actually admitting to such behaviour. However, to put the results into context, most of the reported instances of academic dishonesty may be considered to be at the 'low severity' end of the various scenarios.

In a large study of source code plagiarism in UK HE computing schools, Culwin, MacLeod and Lancaster (2002) obtained data from 50% (55/110) of UK HE Computing schools. One key finding was that in 58% of responses (31/53), the staff who responded estimated the scale of plagiarism to be at least moderate (on a scale of rare, occasional, moderate, prevalent, extensive). When questioned on the proportion of students undertaking source code plagiarism in initial programming courses, 45% respondents (22/49) gave estimates ranging from 20% to more than 50%. Several respondents noted that 'collusion' or 'academic collaboration' is much more common than outright plagiarism 'per se' – consequently only blatant cases might be taken forward for more formal action. The authors report that plagiarism was not restricted to source code and 'several responses contained pleas for help with a problem that was seen as out of control' (Culwin *et al.* *ibid.*).

A recent survey of both students and staff at Northumbria University ascertained the proportions of both staff and students who believed certain forms of cheating to be common (Dordoy, 2002).

| Proportion thinking that cheating is 'common' (i.e. more than 10% cases) | Staff % (n=15) | Students % (n=140) |
|--|----------------|--------------------|
| Copying a few paragraphs from a book/internet uncited | 70.9 | 73.9 |
| Copying most of an assignment from some source | 14.7 | 24.3 |
| Downloading a whole essay from a cheat site on the internet | 3.4 | 11.2 |
| Buying an essay from a ghost-writing service | 1.7 | 11.1 |
| Cheating in an exam | 3.7 | 21.1 |
| Making up data for a project or lab class | 19.8 | 60.2 |
| Working with another student on work that is meant to be individual | 61.8 | 76.6 |
| Passing off others' ideas/images/designs as your own | 45.2 | 76.6 |

Source: Dordoy, A (2002)

Without asking students to self-incriminate, the results are both illuminating and disturbing not least as it taps into the *perceptions* of the typicality and perhaps, therefore, the apparent 'normality' of a range of activities. In every instance, students gave higher estimates than did staff, and in some cases (downloading a whole essay, making up data) the differences were dramatically wide.

In the UK, plagiarism is now considered sufficiently serious for academics to consult JISCPAS (Joint Information Systems Committee Plagiarism Advisory Service) for assistance, electronic and otherwise, in the detection and prevention of plagiarism (JISC,2003).

1.2 Which students are most likely to engage in cheating behaviour?

The study conducted by Newstead, Franklyn-Stokes and Armstead (1966) researched the personal characteristics of those who do engage in academic cheating and their findings are consistent with studies from the North American literature. In particular, cheating appears to be associated with :

- Male rather than female students. The latter are more likely to engage in collusion 'to help a friend'
- Non-mature students (i.e. mature students are less likely to cheat)
- Students with an instrumental attitude towards higher education, particularly if less able
- Science students rather than health or education students

On a psychological level, it has been hypothesised that students with high self-esteem are *more* rather than less likely to engage in cheating behaviours. It appears that students with a high need for approval would engage in cheating because they were concerned about the effects of academic failure upon their own self-perceptions (Jacobson, Berger and Milham, 1970). Students who placed a lower value on mastery motivation (desire to understand the material) and a higher value on extrinsic motivation (desire to gain a high grade, or to help a friend) were reportedly more likely to cheat (Jordan, 2001). The data may well be curvilinear in that both ends of the academic continuum are tempted to plagiarise but for differing reasons.

1.3 Can the rise in plagiarism be explained ?

A variety of explanations have been advanced to account for the prevalence of plagiarism in the modern university. Some would cite 'a diminishing sense of academic integrity' (Davis *et. al.* 1992) but the view of prominent investigators in the UK is that much behaviour can be explained because students have not properly learnt, or internalised, the correct rules for citation and referencing (Carroll and Appleton, 2001).

However, the survey by Dordoy (2002) is illuminating in the way in which it taps into perceptions of common reasons for cheating from both staff and students. The most reasons cited by *students* (with corresponding perceptions by staff) were :

| | Students % | Staff % |
|--|------------|---------|
| Wanting to get a better grade | 59 | 36 |
| Laziness or bad time management | 54 | 42 |
| Easy access to material via the internet | 40 | 35 |
| Not understanding the rules | 29 | 40 |
| It happens unconsciously | 29 | 30 |

Here the instrumentalism exhibited by students is particularly noteworthy and demonstrates clearly the motivations and mind-sets of current generations of students. It is equally interesting that 'poor time management' should be cited as the second most important factor as it indicates that the pressure to plagiarise may increase if students leave their academic writing until the last moment.

Some of these themes receive reinforcement by other recent studies in the UK. We might cite the following :

- Less commitment to the learning process and instead concentrating upon the final certificate (JISC, 2002)
- Student lifestyle, family responsibilities and housing pressures encouraging students to acquire the best possible results with the minimum of work (JISC, 2002)
- Less effective time management, particularly by first year students
- The massification of higher education which has resulted in cohorts of students from wider educational backgrounds and lower entry qualifications (as part of the longer term

- policy that up to 50% of the 18+ age cohort experience higher education)
- Previous college experiences may dispose students towards qualification getting rather than independent learning
 - Pupils may use the internet extensively at school with encouragement from teachers and parents in which acknowledgement of sources is not a priority. As Tony Halpin, the Education Editor of 'The Times' reports: '*Teachers had confirmed in writing that pupils' coursework was original, despite clear evidence that children had either colluded with each other or plagiarised material from the Internet*' (Halpin, 2003)
 - Genuine student confusion concerning collusion, collaboration and copying (particularly marked in the case of groupwork)
 - Websites may well be seen as a universal library in which all material is regarded as 'free'
 - Students may not perceive plagiarism as particularly illegitimate in circumstances in which lecturers themselves recycle their material or students perceive that they are badly taught (Macdonald, 2000).

[adapted from: Tribe, D. and Rendell, R. (2003)]

These factors do not seem to vary much as one moves from country to country. An Australian guide discusses a list of factors which are very similar to the above, including the observation that students are more likely to plagiarise when others in the class appear to be cheating, or the institution does not make the detection and penalties for plagiarism a high priority (University of Technology Sydney, 2002). When students find themselves in difficulties, it seemed that there was a preference to rely upon friends rather than to use university resources such as study skills support (Zobel and Hamilton, 2002). Another Australian academic after a discussion of the factors which account for the increase in plagiarism argues that 'the key explanatory variable, it would seem, is the increasing availability of electronic text' (Williams, 2002). Williams argues that is this factor in combination with any of the motivational factors previously discussed which can be said to have spawned the 'new virulent strain of student copying', a phrase attributed to McKenzie(1998). This view is not uncontested, however. The report by Chester (2001, cited in Carroll, 2002) reinforced by the personal experience of a leading research in the field,

Jude Carroll, is that 'unreferenced copying from books, journals and course notes is more common than straight copying from the Web' (Carroll, 2002, p. 14)

1.4 Policies for combating plagiarism

The immediate response of the academic community has generally taken two forms. The first of these is to ensure that at an institutional level, appropriate warnings and penalties are publicised to the student community and a set of institutional procedures are put in place to mete out appropriate punishments to offenders. The second approach is to 'fight technology with technology' and to invest in plagiarism-detection software that will help to identify suspect pieces of work. A considerable lead has been set by JISCPAS – Joint Information Systems Committee Plagiarism Advisory Service- which announced improvements in its electronic detection software, to be made available to members of the academic community (JISC, 2003).

To quote from the JISC press release:

Improvements to this service mean that staff can now carry out a much more extensive electronic comparison of students' work against electronic sources. The addition of a number of important subscription resources such as ABI Inform, Periodical Abstracts and Business Dateline will mean that with these alone will add nearly 5,000 volumes to the database, ranging from the 1970's to the present. With the growth of essay cheat sites, the continued addition of authoritative resources to the central database means that the service grows in effectiveness while the deterrence effect of an institution's using the detection service increases too. Other improvements mean that the software also uses a more powerful web crawler, with the ability to detect not only archived or deleted web pages, but also from documents in pdf and other formats.

Further improvements will enhance the services for lecturers and teachers. For example, the "Dynamic Originality Report" will, in just five seconds, provide the opportunity of viewing submitted

work alongside the matched source.

Source: JISC (2003).

However, it is important to stress that as JISC themselves point out, 'technology can only assist us, it will never replace the expertise of humans and that the answer to problems usually lies in process and procedures, not technology alone' (JISC, 2002). For these reasons, JISC has not just confined its attention to the technical aspects of the evaluation of plagiarism-detection software. It has also sponsored workshops open to the FE and HE community and commissioned a good practice guide to plagiarism prevention (Carroll, J. 2002.) The developing consensus is that the way forward lies in :

- Appropriate assessment mechanisms
- A supportive institutional culture
- Clear definitions of plagiarism and policies for dealing with it
- Training for both staff and students

Policies that have been advocated in the literature can be grouped under a series of headings:

Assessment strategy

Changing the nature of the assessment material is probably the single most important step that tutors can take. In particular assignments should be set that differ substantially from year to year, that demand evaluation rather than just collation of materials, that may call for a degree of self-reflection on the part of the student and that test critical thinking skills. In the case of group work, it is particularly important that students understand where *collaboration* is justified but where *collusion* is not. It is also possible to change the way in which assessment is actually performed. For example, Ryan (2001) reports an interesting case study from Birmingham University in which students were encouraged to research their essays in their own study time but to actually write them under supervised conditions (which had the bonus of cutting down on the marking load!). This point is also reinforced in the suggestions provided by Moon (1999). Another useful strategy may be to ask students to append photocopies to their completed work of some of their strategically most useful sources, including articles read 'in the original'.

Teaching citation skills

Citation skills need to be constantly taught and reinforced and stressed as an indication of worthy membership of the academic community. Citation and referencing needs to

be reinforced at critical intervals (and not just in the first year). It may be necessary to give students exercises in précis writing such that they can appreciate what is regarded as legitimate in the summary of a source and what is not.

The handbook by Carroll contains some excellent tutorial material which can be used to indicate to students the boundaries of acceptable and unacceptable practice (Carroll, 2002). What is important to note here is that purely negative messages on the dire consequences of failure to observe academic conventions may well be abortive. Rather, students (and particularly those whose skills are poorly developed for whatever reason) will need some practice to learn the relevant skills. Core modules may well be filled with a discipline or theme-based content so a coordinated strategy within a department may be necessary to ensure that academic conventions are not only taught but are also reinforced at key points.

Deploy a 'contract' with the student body

If the academic conventions are both taught and reinforced, then students should be encouraged to observe an 'Honour code', which often takes the form of signing and appending a *Declaration of Academic Integrity* to each assignment. There is some evidence that plagiarism is discouraged in classes in which the tutor knows the student and can track their work over several assignments – in an age of massified and modularised mass higher education, however, this may be difficult to operationalise.

It appears that when tutors have created a positive climate of involvement and interest rather than detection and punishment, then instances of plagiarism are likely to diminish (Carroll, 2000). American researchers have published data which indicates that cheating at institutions with honour codes is significantly less than at institutions without (McCabe and Trevino, 2002). The key here is that cultures need to be created and reinforced in which unethical and cheating behaviours become socially unacceptable amongst students and little sympathy extended to those who do practice academic dishonesty.

2. Lessons for e-Learning

2.1 Examine processes as well as outcomes

An assessed piece of academic work is typically judged solely by its output whether it be an essay, examination answer, performance or other artefact. However, there have always been some extended pieces of work such as final year projects or dissertations where some of the marks are awarded for an interim review of progress. To that extent, there is a recognition that some of the *management of the process* of the assessed piece of work as well as the absolute outcome should also be subject to an assessment which contributes to the total mark. But in the search for modes of assessment which place a premium upon academic integrity and encourage systematic and constructive engagement with course materials, there is now a case to be made for incorporating some assessment of processes as well as outcomes.

The mechanisms by which this may be achieved are limited only by the imagination of the tutors. Some suggestions are made below:

- Assignments could suggest a critical examination of the ways in which the student has learnt the material, overcome obstacles and blocks to understanding or identified their own learning style. In the case of group work, it is particularly instructive for students to evaluate their own contribution to the group work as well as of their student collaborators. This may be a painful period of self-examination. If students record their own and other's attendances in a log attached to their assessment, then elements of peer-group assessment are introduced indirectly.
- Technology can be deployed (e.g. through the Statistics component of Word) to log the total amount of time and revisions devoted to an assignment. Students deploying a VLE could reference the number and quality of on-line contributions of their collaborators in the case of group exercises. Or critical points of assessed work could be assessed at different times. For example, it is possible (although time-consuming!) that particular parts of an exercise could be submitted electronically by a certain time-scale and then marked. This does assume that

tutorial resources can stretch to this in a massified system. However, it is much more justified in larger-scale pieces of work such as the dissertation or final year project submitted as the culmination of a degree programme.

- Time management is one issue which appears to be critical in that plagiarising students are more likely than not to be subject to mis-allocated time allocation and to be rushing their work to meet a deadline. Time management skills may need to be explicitly taught until a degree of academic maturity occurs. As Harris (2002) observes 'some students are just procrastinators, while others do not understand the hours required to develop a good research paper and they run out of time as the due date looms' Time management may now be exacerbated in situations in which students are having to juggle travel, domestic responsibilities as well as participate in the labour force for economic reasons (JISC, 2002).

2.2 Reward original and critical thinking

Many assignments would ask for a 'critical evaluation of xxx' where students would typically display their knowledge of a subject matter before subjecting it to their own critical evaluation. In this process, there is a temptation to which many succumb to pad out with descriptive material leaving little time within specified word limits for their own more evaluative comments. This problem could be more easily overcome by shortening assignments, indicating to students that descriptive material will *lower* a grade unless kept to an absolute minimum. In the graphic words of McKenzie (1998)

*'the **New Plagiarism** may be worse than the old because students now wield an **Electronic Shovel** which makes it possible to find and save huge chunks of information with little effort, reading or originality'* (emphasis in the original).

The same author suggests that original thoughts should be written in green ink (whether actual or metaphorical is a moot point) so as to display more clearly the points at which students are arguing their own case. It is an interesting observation that the notion of *key skills* which has suffused many parts of even the higher education curriculum are

giving way to an emphasis on the deployment of critical thinking skills available at AS and AEA level and, from 2004, as an A level in schools and colleges. (QCA, 2003).

2.3 Use technology to design new patterns of teaching and assessment

Forms of poor academic practice can be ameliorated if student interest is aroused and maintained in the subject matter. The ubiquity of IT can be used in more innovative ways. At a basic level, attendance and participation can now be monitored electronically and whilst not claiming that techniques of computer assisted learning hold all of the answers, the judicious use of some on-line learning and assessment materials can be used to enhance participation. The opportunities afforded by virtual learning environments can also be beneficial, particularly in making practice materials easily available to the student body. The creation of on-line communities that can spread within and between components of a course can also help students to identify more with the learning process and also help to spread a professional ethic amongst course members. Again, this all reinforces the point that the comparative ease of plagiarism may jolt us all into rethinking learning and teaching methodologies and, in particular, the conventional modes of assessment so that poor academic practices can be designed out of the system.

3. Conclusion

There are some grounds for pessimism if we accept that the 'The *new plagiarism* is geometrically more powerful... we have moved from the horse and buggy days of plagiarism to the Space Age without stopping for the horse less carriage' (McKenzie, 1998). The interesting question is whether enforcing a value system in the correct attribution and citation of material seems far removed from a world view in which the downloading of material from music tracks to travel destinations is mundane and common-place. The skills of citation and correct referencing may never be deployed again in the course of a student's professional life unless further professional training takes place. From this view point, we could argue that such arcane skills reflect an elite value system which is now being enforced upon increasingly large cohorts of students who, in previous generations, would not have experienced higher education. The counter-argument to this view is, of course, that in a knowledge based economy

standards of integrity and responsibility remain as important as ever and the correct attribution of materials is one way of addressing and reinforcing this value ethic. We need to remind ourselves that the majority of poor academic practices are still at the low end of a scale of severity and incidences of outright and overt cheating behaviour is still comparatively rare in British higher education. With some thought, it is possible to re-engage students with a philosophy of deep learning and design out some of the conditions in which plagiarism has been allowed to flourish in the past.

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