

Anti-Plagiarism : a Weapon of Mass Self Delusion?

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***Abstract:** Plagiarism by undergraduates has long been presented as a cardinal sin and is strongly proscribed in the academic policies of every university, yet surveys have found very poor compliance from the undergraduate population which raises the issue of whether universities are deluded in their view of plagiarism. It is argued that plagiarism is widespread and well accepted in the community at large and this influences student behaviour. Discussion shows that from the student perspective there are many good reasons to copy and only a few strong reasons for not copying. Surprisingly these good reasons for not copying are seldom articulated to the student body and instead the university relies on teenagers' willingness to follow apparently meaningless rules based purely on authority.*

Based on these findings an anti-plagiarism policy and approach for teaching is outlined. The approach is based on positive motivation elucidating good reasons for not copying and the appropriate use of sanctions.

Introduction

Plagiarism is universally condemned in university policies and is simply seen as an evil thing to be stamped out with strong penalties; RMIT (2007), Melbourne University (2007), Monash (2007), Victoria University of Technology (2007), Swinburne University (2007). Literature on plagiarism is filled with colourful condemnation, Park (2003) presents an excellent collection; “the unoriginal sin”, “cancer that erodes the rich legacy of scholarship”, “thought thief”, and “intellectual shoplifter”. More serious reasons for preventing plagiarism can be seen from a variety of sources-

- Professor Peter McPhee (Deputy Vice Chancellor Academic, Melbourne University) (Melbourne 2007) states on Melbourne's plagiarism web site that “we want our graduates to be capable of independent thought, to be able to do their own work”.
- Marsden (2005) raises the issue of public safety and comfort being at risk if professionals cheat at university.

Given such condemnation and reasoning, the sin of plagiarism must be great indeed, yet the compliance rate in the undergraduate population is very poor with studies reporting high levels of cheating; for example 60%-70% by Caruana (2000), 90% by Sheard (2002), and 38% by Wiedemeier (2002). There is clearly a large gap between the view of universities and the view of undergraduates that points to either the university or student body being deluded, or both. If plagiarism is indeed a serious issue then such a large gap in vision is unacceptable and considerable priority must be given to resolving these different visions.

This paper will first consider the nature and prevalence of plagiarism in the wider community which informs and moulds the undergraduate vision more than any other university policy. With community views considered the undergraduate views of plagiarism and university policies are analysed which uncovers many excellent reasons why students should plagiarise and very few reasons why students should not plagiarise. Next the common poor reasons against plagiarism are examined then the few good reasons against plagiarism are identified and discussed. Finally a basic outlined of an improved anti-plagiarism program for an undergraduate course is proposed, based on the few good reasons.

Plagiarism in the Wider Community

Plagiarism in the wider community is well accepted to the degree that the term “plagiarism” would not even occur to most people. Typical examples range from innocent confusion regarding academic rigor (Martin 1994) to a sense of institutional impotence (Larkham 2002). More widely accepted forms of “passing off some else’s work as one’s own” include:

- Ghostwriting which is common in the popular press.
- Political speech writing.
- Misrepresentation of report authorship in bureaucracies.

Other examples include-

- Purchase of prefabricated materials used to create a product or service. For example “I baked this cake”, by using a packet mix.
- Out in industry copying is seen as a method to reduce time and cost. As a young engineer one of the authors (Pj Radcliffe) was bluntly told “the only time its wrong to copy is if you get sued, apart from that it’s a great idea that saves a lot of time and money.”
- “Branding” is a way in which a relatively generic product is passed off as a particular brand. The true manufacturer provides the product under the brand name of a client.
- Group work seldom has even input from all members despite good intentions. Some group members will benefit from the higher output of other group members - which is a form of plagiarism.

Our current community sees these forms of plagiarism as normal and acceptable and many successful careers, perhaps most obviously those in politics, are built on plagiarism as exposed above. Would any politician commence a speech by saying “I would just like to read a speech written for me by ...” ? Despite the acceptance of plagiarism in these circumstances there are times when plagiarism is clearly unacceptable in the community, for example commercial level piracy and sale of music or film. What is the key that separates acceptable and unacceptable plagiarism? Martin (1994) makes an excellent distinction between competitive plagiarism and institutionalise plagiarism. In competitive plagiarism there is someone who clearly loses by the act of plagiarism whereas in institutionalised plagiarism there is no real loser as the original author is in some way rewarded for their work if not with an acknowledgement of authorship.

The concept of plagiarism being wrong when there is a clear loser, translates well to the academic community. For example in formal publications the failure to cite a reference deprives an author of a citation that may help advance their career.

However it does not clearly translate to undergraduate reports where plagiarism does not disadvantage the original author. Ashworth (1997) comments that students are inhibited from cheating when there is a victim that can be conceived in personal terms.

Student Views of Plagiarism

Modern society is rich in rules and regulations. A sizeable number of which are useless or unfair to the individual, or inappropriate or contradictory in circumstances. A practical result of this is what is sometimes termed “belief fatigue”.

Even young children adopt the necessary survival strategy of dividing rules into those which TRULY matter and those where one should avoid being caught. A clear demonstration of the impracticability of observing all relevant rules can be seen in the once popular practice of public servants “working to rule” as a form of protest. Likewise the colloquial phrase of performing a task “according to the book” illustrates the principle that a commonsense interpretation is the hidden and unacknowledged arbiter and prioritiser in the jungle of rules.

It can thus be said that for everyday life it is necessary to find a balance between official rules and the practical demands of daily life. This ranges from crossing the street against a red light, driving a car too fast, parking illegally, to deciding what would or would not be a “valid” tax deduction. It should be noted that many rules commonly encountered in daily life do not carry great moral authority other than the threat of being discovered in breaking them and possible financial fines.

Given the general belief fatigue found in society and the large number of rules and regulations at university, it is not surprising that in order to survive students need to choose a practical course that balances the demands of acquiescing to rules with their practical benefits.

From the authors' experiences lecturing at RMIT University the issue of plagiarism amongst students is, at its root, not so very different from wider social compliance issues already discussed. In an environment of competitive survival, it is not the abstract question of what constitutes plagiarism according to official rules, but '*what is accepted practice*' that determines student behaviour. The peer group is often more important than abstract rules because the peer group provides a practical example of how anti-plagiarism rules apply in reality.

The peer group also provides protection in the sense that if everyone follows the same practice the entire group would have to be punished, which is less likely.

Lastly the peer group is the practical reference point for the lowest applied common denominator. To adhere to a stricter interpretation of anti-plagiarism rules than is required by the lowest applied common denominator would disadvantage that person. Some individuals may of course choose stricter interpretations, but they would presumably do so with the understanding that they are paying a price in terms of lower grades for a presumed benefit in greater skills and perhaps private moral feeling.

The net result of peer group behaviour and belief fatigue is a range of reasons why students plagiarise as found in our experience and that of other authors Ashworth (1997), Caruana (2000), and Park (2003).

- Everybody plagiarises to save time and effort. The distinction is often not clear, and the seriousness varies.
- There is no victim so there is no offence being committed.
- Getting caught is unlikely and even then there will be so many other people caught that the punishments can't be too severe. The prevalence of the practice provides protection.
- The material or instructor is of no interest, of little value, or not relevant to my future.
- Higher grades, even at the cost of better skills and knowledge are more valuable than lower grades.
- While the payoff for plagiarism is in the short term, the costs are diffuse in the distant future (unless one is caught).
- Most anti-plagiarism systems are sporadically or unevenly applied which is unfair so the entire anti-plagiarism system is invalid and should be ignored where possible.

Student View of University Policies

Most plagiarism guidelines offer rules with little or no reasoning RMIT (2007), Melbourne University (2007), Monash (2007), Victoria University of Technology (2007), Swinburne University (2007). The most common approach relies on the authority of the institution and the threat of penalties. Where reasons are given the language is usually at a highly abstract and scholarly level. The particulars are often long winded and complex, embedded in a long list of institutional rules and procedures, but essentially reduces to: "*Plagiarism is wrong, don't do it*". When the issue is brought to public attention such as in a poster blitz, then it often proclaims its own impotence through excessive zeal and in attempting to impose compliance through intimidation (of draconian penalties) or blunt appeals to authority "*don't do it because we say so*".

From the authors' observations students find such policies less than convincing, given the realities of rules and regulations and belief fatigue most students attempt to work around any anti-plagiarism activity either from a sense of necessity challenge or as part of the accepted norm.

Poor Reasons Against Plagiarism

It can be argued that there are two much vaunted methods by which an educational authority undermines its own efforts to reduce plagiarism. These methods look on the surface as logical and correct procedures and within certain parameters they are necessary.

These two methods are:

- 1) unrealistically high penalties, designed primarily to deter through a "fear of being caught".

2) unwieldy and cumbersome processes which in the final analysis which do not deter the problem at its source in practical ways.

Addressing the issue of using severe penalties as deterrents:

When an authority finds itself powerless to enforce a policy in practical terms a common recourse is to use fear of being caught. If this has limited effects (which it often does in the case of plagiarism) then a natural reaction is for penalties to be escalated. While at first sight and in the short term this may seem like a reasonable action the effect of unreasonably severe punishments is that this policy undermines itself for two reasons:

- It sends a clear signal that the authority is impotent to affect real change on the individual level, as evidenced by the escalation of penalties. The authority is in fact admitting that: *“we hope to intimidate you into compliance, because on an individual level we can not effectively control the situation”*.
- The underlying impotence of the authority and the primary rationale of severe penalties as intended to induce fear through intimidation become very apparent. This approach is sometimes reinforced by choosing a number of students and making ‘examples’ of them with the aim of deterring others. Being based on fear and intimidation to enforce compliance such an approach tends to build resentment, especially if the majority of students understand that a high degree of plagiarism is accepted in practice.

A further practical problem of penalties which are primarily designed to operate through the “fear of being caught” is that it is difficult to implement them in practice. It has been observed that while penalties should appear frighteningly high and draconian as a deterrent, in the event that a student is actually caught plagiarizing it is not reasonable to apply the full force of all penalties to that individual. Particularly not in an environment where learning and training are paramount and students are paying substantial amounts in fees. Excessive penalties that do not realistically reflect the ‘crime’ are liable to create a backlash in a competitive education environment.

Addressing the issue of cumbersome and unwieldy bureaucratic processes:

In theory a student caught for plagiarism should be subject to the full bureaucratic processes of University systems and policies. Many of these systems in place are bureaucratically too cumbersome to deal with plagiarism effectively, requiring large amounts of time and documentation. This of necessity pushes teaching staff into practical and unofficial channels which may be challenged by students. It also has the counterproductive effect of weakening anti-plagiarism while officially giving the impression of having done the ‘correct thing’.

A further ineffective observed strategy for anti-plagiarism has been ‘Overly-moralizing’ the issue of plagiarism. This tends to have unwanted effects. By ‘overly-moralizing’ we refer to the practice of excessive appeal to honesty, morals, ethics and ‘right versus wrong, divine or other authorities and inflating plagiarism beyond its reasonable impact to the point of becoming a quasi demon in its own right. In a social context where copying of some form or other (as already alluded to above) is commonplace, a sense of realistic proportion will be more effective than untenable claims of morality.

Good Reasons Against Plagiarism

This paper has argued that the traditional strong rhetoric and reasons against plagiarism by universities has failed and this is borne out by the statistics quoted earlier. If such failed motivators are thrown away what reasons can be given to students? If good reasons cannot be clearly articulated to the undergraduate student body in a manner they can understand then the anti-plagiarism rules for the undergraduate program may deserve to be thrown away.

Fortunately there appear to be some reasons that do make sense to both the university and the undergraduate student-

- Public safety as raised by Marsden (2005) can work in vocationally oriented courses such as medical science and engineering. The argument is that plagiarism prevents an individual developing skills and knowledge. That lack of skills may put the public at risk when the

student graduates and takes on a professional role. In courses such as arts and education this argument is harder to sustain.

- Skills and knowledge acquisition is by itself a powerful argument when presented from a student-centric point of view. This argument extends Marsden's reasoning in that plagiarism prevents an individual from gaining skills and knowledge which will disadvantage them in later courses, gaining a job, and progressing in their career. Skills and knowledge should be interpreted both as directly applicable skills and knowledge and meta-skills such as problem solving, persistence, tenacity, and lateral thinking.

NB: It might be noted in passing that a sizeable number of engineering students which the authors encounter in their regular teaching work are under the impression that it is possible to avoid programming of any sort. The very real necessity of being able to program in some form or other, generally becomes apparent in the later years of undergraduate study where some 'corrections' can still be made.

- The warranty or reputation aspect of a university degree can be appreciated by many undergraduates. The basic argument is that a university degree is a kind of warranty to an employer and the community as to the skills and capabilities of a graduate. If the community sees undergraduates of poor capability and high marks then the value of that degree title and university is reduced.

Students may not only be the beneficiaries of plagiarism they may also be the willing donors of material for reasons such as peer regard, peer acceptance, power, and even attempts to curry favour with attractive students. As such an extra set of anti-plagiarism reasons need to be articulated-

- Donations of material does damage to the recipient in the long term as they do not grow their knowledge and skills.
- Donating material will increase the marks of less capable students and reduce the value and regard of the degree title and the university. This tends to encourage competition.

The reasons discussed thus far elucidate the long term natural consequences of cheating and are not an artefact of the instructor or university. They make sense from a student-centric commonsense perspective. Once students accept the veracity of these arguments then they will find it more acceptable for the instructor and/or university to state that these long term consequences are so severe that short term consequences such as marking penalties are implemented to offer immediate encouragement to avoid plagiarism.

Anti-Plagiarism Process in an Undergraduate Subject

For plagiarism to be reduced to a negligible level, the problem needs to be acknowledged and structural changes made to courses, assessment methods and the way the issue is communicated to students. In part the impetus for this paper comes from experiences in which a well designed first year programming course failed to impart even fundamental skills for the subsequent year. It was found that the core variable was the widespread copying of work from other students. The traditional anti-plagiarism system was quite impotent and did nothing to solve the problem. The solution came from an analysis of the "good reasons against plagiarism" just discussed which led to a dramatic course restructure.

Aspects for limiting plagiarism: communication

It is important to initially clearly outline the correct procedures for acknowledging another's work. Confusion about how to scholarly reference work abounds, particularly in the early years of University (McGowan 2003). Academics often assume as obvious the conventions which they use everyday and which form the backbone of academia but these conventions are not always obvious to the student body. Students frequently do not understand what they can 'copy' and what they cannot 'copy'. The fine but important distinction that copying is not wrong per se, but rather it is wrong to pass off another person's work as one's own.

The issue of plagiarizing/cheating should be raised clearly and rationally with the student body. The rationale and reasons both for and against plagiarism should be explained in clear commonsense language. The solid reasons (outlined above) for not plagiarizing should be clearly illustrated and

explained e.g. inability to perform the requested work, endangering self and others with a substandard product. It is thought advisable to honestly discuss wide spread ‘accepted plagiarism’ in the general community such as, ghostwriting, political speeches, “branding” and wider industry copying practices. These practices form part of the social milieu in which students are immersed.

This may then be contrasted with the rationale for not plagiarizing, which in the final analysis can be summed up as: *In order to be able to work as a professional a certain amount of skill and knowledge is required. Copying from other students prevents development of these things.*

Aspects for limiting plagiarism: course structure and assessment.

The temptation and possibilities for plagiarism can be drastically reduced through a well structured course which:

- Makes plagiarism technically more difficult, such as through project variation, or rigorous test conditions.
- Use specific anti-plagiarism tools such as Turnitin, and e-AutoTest.
- Bite sized frequent tests that do not carry an excessive percentage of marks provide early feedback and give students opportunities for ‘course correction’. Doing poorly in one test still gives hope for improvement in future tests.
- Assessment should be as impartial as possible. Automated testing of student work is possible in engineering and the sciences (Radcliffe 2004). Software programs lend themselves to being tested by other software programs in a rigorous and methodical way that removes tutor interpretations.

Table 1 below shows the results obtained through an automated testing program for software laboratory work. The program required students to produce code which took two numerical inputs from the command line and added them. In theory a very simple task, but made more complex and challenging by the need to detect erroneous input.

Students in an earlier version of the course with a structure where plagiarism was easily possible, were not able to perform even the basic addition which required no invalid input error checking.

Error checking tests:	% Pass	Number Passed	Number Failed
Param test 1 argument .	82%	73	15
Param Test 3 arguments.	88%	78	10
Param Test 4 arguments.	88%	78	10
Param Test 5 arguments.	88%	78	10
Test invalid input : Valid - INvalid	65%	58	30
Test invalid input : Valid - INvalid	65%	58	30
Test invalid input : INvalid - INvalid	67%	59	29
TOUGH: Test invalid input : number-letters	18%	16	72
TOUGH: Test invalid input :messy stuff1	18%	16	72
TOUGH:tricky check 1	60%	53	35
TOUGH: tricky check 2	64%	57	31
Test Range check 1	68%	60	28
Test Range check 2	70%	62	26
TOUGH: Murphy's tests: add zeros	27%	24	64
Adding two numbers			
ADD check 1	55%	49	39
ADD check 2	53%	47	41
ADD check 3	44%	39	49
ADD check 4	50%	44	44
ADD check 5	50%	44	44

Table 1: Counterintuitive results of auto testing.

Table 1 shows the interesting and counterintuitive result that students were better at able to detect erroneous input than in simply adding two numbers. This appears to be because of incorrect error detection where valid input was mistakenly identified as invalid and erroneous.

It was further observed that even such a relatively simple task as adding two numbers using a popular programming language was a major challenge for first year students. The challenges were however not purely technical, but highlighted meta skills and concepts such as being able to 'baseline' a project, interpreting specifications, working in levels of increasing complexity and prioritizing tasks. Thus plagiarism detracts not only technical skills but also cognitive and higher level meta-skills. Whether on the other hand plagiarism actually teaches a hidden curriculum of survival skills for a social system that may actually bear a useful resemblance to the working world is a different topic and subject to debate.

Formal data is not currently available, however from anecdotal evidence to date, making plagiarism significantly more difficult in the new restructured course by using the an objective test across all laboratory groups and setting short term regularly tested goals, has increased the technical and cognitive ability of students. The range, diversity and complexity of student work has increased dramatically.

Aspects for limiting plagiarism: 'follow up'.

Clearly state penalties for cheating and detection methods used – calling plagiarism 'cheating' may add a subtle emphasis. Follow up on promised deterrents is required:

- Application of penalties. Penalties must be realistic and fair. It is not realistic to apply lengthy bureaucratic processes to every instance of copying.
- Provide feedback about what has happened to students who were caught. Deterrent through example.
- 'Loss of face' and reputation for those clearly found to be have copied can be a good social deterrent.

It should be noted that unless the lowest common denominator of accepted practice is practically and effectively enforced, then it is very difficult for individual students to stand against the tidal pressure of such accepted practice by refusing to comply with their peer group. This is especially so as the financial pressures of study take on greater importance.

A useful analogy more applicable for the post-University age group might be the issue of tax-evasion. Certainly it can be said that the incentive to be an 'honest tax payer' is to some extent modified by accepted practice. Issues of 'legal' vs 'moral' vs 'accepted practice' are frequently blurred or at least subject to debate in the taxation arena. One might like to ponder the loss in revenue if the Tax Office were to adopt the similar standards as are employed against anti-plagiarism in Universities.

The currency for students are grades, the currency in the taxation area is money itself, but both types of currency have tangible and immediate payoffs.

Conclusion

The traditional ways in which plagiarism has been discouraged by universities has simply not worked. If an advertising agency had achieved a similar result for their clients they would have been sacked long ago. This paper has argued that this failure is due in large part to the belief fatigue present in modern society and a university concentration on promulgating rules rather than providing positive motivation to students. As a result students concentrate on the many positive reasons *for* plagiarism and copy when the cost-benefit trade-off appears to warrant the risk.

In order to dramatically reduce plagiarism undergraduate students must first be motivated with compelling positive reasons not to plagiarise based on their own world view and self interest. This will discourage plagiarism and encourage self policing. Motivation is further improved if the likelihood of being caught is increased and the consequences of failure are non-trivial.

This paper saw the compelling, positive reasons against plagiarism to include-

- Plagiarism may result in incompetent professionals that represent a safety risk to the community.
- Plagiarism can stifle the acquisition of key skills and knowledge that may stifle professional development and success.
- Plagiarism can reduce the community's value and belief in a degree title and the host university - which is to the disadvantage of the student.

To quote Johnston's Law (an answer to Murphy's law) "Things don't have to go wrong but it takes time and effort to ensure things go right." Anti-plagiarism programs definitely fall under Johnston's law but the rewards of just the improved skills and knowledge in the student body makes the effort worthwhile.

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