

Analysing Student Perceptions of Intellectual Property Rights in a Self-plagiarism Framework

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Abstract

The volume of material, especially in electronic form is increasing at a **rapid** pace. Together with improved access to the Internet, the opportunities for plagiarism or the reuse of material among students and researchers alike are increasing. In this regard our paper reports on a survey done among 86 students at a residential university. The questions asked were aimed at evaluating the students' understanding of what the stealing of intellectual property entails. Coupled with this survey is an analysis of a previously developed framework for testing the view of a number of researchers about self-plagiarism. This paper further investigates to what extent the survey questions fit into the self-plagiarism framework. The conclusions are that students are not sufficiently capable to detect acts of plagiarism. It was also found that the framework could be usefully enhanced to model plagiarism, cheating and the copying of material among students. Some solutions to these problems are offered.

Keywords: Copyright infringement, intellectual property rights, self-plagiarism, reuse, student perceptions.

Introduction

In academic institutions there is often a problem of using the work of someone else without acknowledging the source. Frequent cases appear where students copy material from books, journals, the Internet, their peers, etc. without citing references. According to Clough (2000) plagiarism or copyright infringements are sometimes committed intentionally by students, but there are cases where students plagiarise unintentionally because they are not aware of how sources should be used within their own work. This problem is not just limited to printed text, but regularly found in electronic publications as well. The submission of assignments electronically makes it easier for both student and lecturer alike, but it facilitates the opportunity to plagiarise (Clough, 2000). Access to the Internet further increases the opportunity to copy-and-paste.

An interesting variant of the above problem is that of self-plagiarism mostly occurring among lecturers and researchers who are under severe pressure to publish for subsidy purposes (Collberg & Kobourov, 2005). Self-plagiarism has many faces and this paper reports on some of these.

Problem Statement

The stealing of the intellectual property of others (e.g. plagiarism) is a threat to the academic world and discredits the value of educations at large. Linked to this is the reuse of a researcher's own previously published work without referencing such work. While there might be reasons for dishonesty among students, e.g. lack of information as to how to go about acknowledging the authors of any useful information, these problems, however, need to be addressed.

Literature Review

Roebke (2000) states that the amount of information on the Internet is increasing exponentially and the incidences of theft of online material are increasing. Librarians see copyright as the element that may provide the way out for their budget problems while publishers see it as essential to protecting their publications. Very little in the way of a compromise has yet been offered (Roebke, 2000).

Infringement on copyright and plagiarism in academia take on many forms. Two important instances are (1) ordinary plagiarism committed by students during their studies and (2) self-plagiarism committed by researchers. In a way self-plagiarism may be more serious simply because opportunities exist throughout the entire career of an academic while ordinary plagiarism by students is normally of a shorter time span. According to Collberg and Kobourov (2005) there appears to be little consensus amongst academics as to what can be regarded as self-plagiarism and what not. Hence in their discussion of self-plagiarism they adopt the word *reuse* to refer to material published more than once. They introduced the following categories for the reuse of previously published material:

Textual reuse: Text, images, diagrams or other material previously published are reused in a particular publication without any reference to the previous work.

Semantic reuse: Ideas from previously published work are incorporated into a current publication, again without acknowledging the origin.

Blatant reuse: The content of previously published work is incorporated in such a way that the two publications are almost indistinguishable. Again, no reference in either work is made to the other one.

Selective reuse: Fragments from previously published works are incorporated into the current one without referencing any of the sources.

Incidental reuse: Texts, ideas and principles that are indirectly related to the current work are incorporated into such work without referencing the source. The reuse of motivating examples is a common occurrence of incidental reuse.

Cryptomnesial reuse: Texts, ideas and principles from previously published work, which the author is unaware of its existence of, are incorporated into another publication (Carpenter, 2002).

Opaque reuse: Texts, ideas and principles from previous publications are simply copied into another publication without referencing the earlier publication.

Advocacy reuse: Texts, ideas and principles from an earlier publication are incorporated into work presented to a different audience or community from that to which the original work was published.

Collberg and Kobourov (2005) tested various views on self-plagiarism among 30 of their colleagues and some of the questions they asked coincide with those tested for 86 students reported on in this paper.

Research Questions

In this paper answers to the following questions are being pursued:

1. When and how do students perceive copyright infringements?
2. Is this a problem at tertiary level (higher institutions)?
3. What can be done to reduce these copyright infringements?
4. Can the proposed framework for self-plagiarism be used to model the student survey?

Research Methodology

Two surveys are addressed in this paper. In the first survey the authors got students to participate in the study to try to get a fair representation of the students who were doing their academic work in different levels at a residential university. The purpose of the study was to identify why students fail to respect intellectual property. Seventy (70) students responded to the call. The data collection for this survey was done through the use of questionnaires distributed to the students (Lubbe & Klopper, 2004).

The questionnaire that was designed to collect data consists of twenty-two questions. The content of the questions acquired every student to provide the specification of gender, the estimation of age, the level of study; and also questions that seek the understanding of the respondents whether they understand the act of plagiarism or not, on the other side searching whether they are taught by their lecturers / tutors about plagiarism or not. The questions were structured to provide answers to the above 4 research questions. All the data gathered from the respondents was analysed, interpreted and expressed in the form of graphs, tables, percentages and statistical analysis. SPSS © software was used to analyse the data.

The second survey addressed in lesser detail this paper is on self-plagiarism by Collberg and Kobourov (2005). They disseminated a questionnaire to 30 colleagues in which they described a number of scenarios and asked for comments. Ten colleagues responded to their questionnaire.

Next we present the results of the survey done under our sample set of students and determine to what extent the survey questions are instances of the Collberg and Kobourov (2005) framework.

Analysis of Results

In this section the results of the student survey after the collection of data are discussed. Through this mechanism of data analysis, the authors were able to reach conclusions getting a sense of why students are breaching copyright. The population consisted of 63% males and 37% females. The ratio of 2:1 was not a choice of the researchers; it turned out this way owing to the way in which the student population was assembled.

The age profile revealed that 52 participants were at the age of 17 –to– 25; 15 participants were at the age of 26 –to– 30 and 3 were 31 or older. The authors disseminated the questionnaires in different places. The collection of data was done when students were busy preparing themselves for the examinations, an ideal time.

Table 1 depicts the two categories undergraduate and postgraduate students who participated in the survey.

Year (level)	Number
Undergraduate	34
Postgraduate	36

Table 1: *Year of study*

The authors observed that plagiarism is not an issue to undergraduate students only, but across the board. This observation is supported by Strong (1994) who claims that plagiarism by students has very little to do with their year of study.

Senior students ought to know more about research than the undergraduate students, hence one would expect them to be less prone to plagiarise than the undergraduates. However, the flip side of the argument is that they are more involved in research-related work; hence the opportunities to plagiarise are more. Strong (1994) also mentions that students infringe on copyright in the digital age simply because it is easier, faster and cheaper.

Is it dishonest to use a graph without citation?	Number
Yes	57
No	7
Spoilt response	2
No response	4

Table 2: *Using a graph without citation*

Table 2 indicates that 81% of the student respondents agree that such action equates to plagiarism. Some of the comments were: if the work belongs to somebody else you need to cite the source. Other respondents said that in terms of copyright act and academic ethics one must acknowledge the sources. All these responses show that most students in the sample are knowledgeable about these issues.

Using a graph without citation is a case of *textual reuse* as defined by Collberg and Kobourov (2005) albeit it for the case of self-plagiarism. Although this question was not explicitly tested in any of their scenarios, there seems to be general agreement that the use of graphs, diagrams, etc. without acknowledging the source is not acceptable, both for the students and lecturers.

Roebke (2000) mentions that it is dangerous to use material without citation because one may be stealing the material of someone he/she personally knows and suffer consequences because of that.

Stating a point you already had in mind	Number
Yes	30
No	23
Spoilt response	5
No response	12

Table 3: *A point you had before reading an article*

Table 3 shows that students plagiarise unintentionally (33%). However, it appears that they are unsure as to what they are actually referencing. The two main responses provided also seem to be challenging each other.

This kind of plagiarism does not have a direct equivalent in the Collberg and Kobourov (2005) framework. The closest match could be reuse by cryptomnesia, which is an unawareness of previously published work. This question was unfortunately not tested by Collberg and Kobourov (2005) but it seems plausible that the academics in their sample would probably have rejected reuse by cryptomnesia. After all how could one prove beyond reasonable doubt that you were unaware of the existence of similar work?

Website Usage Without Citation	Number
Yes	11
No	51
Spoilt response	2
No response	6

Table 4: *Usage of Website source with possibly non-expert opinions*

Table 4 shows that 73% of the respondents are against the use of personal website information if it happens to be an opinion. The suspect reuse of website information was not covered by the Collberg and Kobourov (2005) survey but such practice could be classified as any of textual, semantic, selective and opaque reuse.

Fournier (2002) mentions that some people are stealing intellectual property by copying an article from a website and publishing it on their own website. This would be a case of *blatant reuse*. The Collberg and Kobourov (2005) participants would certainly reject this practice as well.

Dishonest to present someone's work as your own?	Number
Yes	54
No	5
Spoilt response	1
No response	10

Table 5: *Presenting somebody's work as your own*

A large percentage of students (54/70) agree that such practice is dishonest. Students have always been using printed journals and books to do

their academic work, but now through the advancement of technology students use computers to access the Internet. Roebke (2000) states that as the Internet becomes busier, theft of material online is increasing. He argues that sometimes this is the result of lack of knowledge about what is considered theft.

Presenting someone else’s work as your own is classified as *blatant reuse* in the Collberg and Kobourov (2005) framework. Such reuse is a practice condemned by all sane academics, e.g. one of the respondents in the Collberg and Kobourov study wrote: I think this [deserves] public flogging’.

Writing a paper for someone else	Number
Yes	42
No	18
Spoilt response	1
No response	9

Table 6: *Writing for someone else and getting paid*

Sixty percent of the students reflect that a person who pays another person to write a paper for him or her is guilty of plagiarism. This is questioning the value of intellectual property because it means people can buy qualifications that are part of becoming a theoretical expert. Smith (1995) rightly points out that cheating in academia ultimately destroys the value of the education. It is unfair and discouraging to those students who pursue their studies honestly. To use shortcuts in this way promotes plagiarism and defeats the idea of genuine education and learning.

The Collberg and Kobourov (2005) framework does not include this kind of activity and future work may well look at ways of expanding their framework accordingly.

Is it plagiarism to be credited without making a contribution?	Number
Yes	41
No	18

Spoilt response	3
No response	8

Table 7: *Getting credit without contribution to the group*

The study reveals that about 59% of the students say that it is plagiarism to give credit to someone who did not work for it. Reid (*cited in Smith, 1995*) states that academic honesty is a keystone for the reputation of all academic institutions and must be accepted and flagged as a responsibility of academic staff and students alike.

Again the Collberg and Kobourov (2005) framework is silent about this issue and future work may well have to expand their framework by addressing this kind of activity.

Is it a plagiarism to use other's work to teach?	Number
Yes	5
No	54
Spoilt response	0
No response	11

Table 8: *Using the work of others to teach*

In response to the question the majority of students felt that it is not plagiarism to use the work of others to teach. The important issue is that such material should be used for teaching purposes only. In fact, all textbooks have such a stipulation at the front. Fournier (2002) states that in the case of using web material ask permission before using it, and comply with the creator's requests.

Naturally Collberg and Kobourov (2005) did not address this point from a teaching perspective but with regards to self-plagiarism one could equally well ask whether it is acceptable to reuse some of your previously written material in a new set of notes without at least mentioning the former. It is not apparent how the academics in their sample would respond to this question. Nevertheless such action would be a candidate for any of the above categories of reuse, except possibly cryptomnesia.

Should a student warn those who are copying?	Number
Yes	33
No	19
Spoilt response	4
No response	14

Table 9: *Copying on a test or an assignment*

Table 9 shows that students are unsure of what is expected of them when it comes to academic ethics. The consensus is that students operate according to their general social norms and values, in other words individuals act on how they feel, not because it is their duty to do that.

In the Collberg and Kobourov framework copying on a test or an assignment could be categorised as any of textual, blatant or selective plagiarism. Strong (1994) states that copying in the digital age is faster and cheaper than copying during the paper-driven days. He further notes that the tools for illicit copying will be more widely distributed and become more sophisticated.

Do you have to cite DVD information?	Number
Yes	27
No	29
Spoilt response	2
No response	11

Table 10: *Usage of information from DVD-film*

The question in Table 10 attempts to find out from students whether they recognise the importance of acknowledging the source of information when they are doing their academic work. The findings reflect that students are not clearly informed about when and when not to acknowledge the sources of information. About 60% of the respondents are unsure when they should acknowledge DVD material. Strong (1994) claims that the use of DVDs and CD-ROMs involves the physical transfer of a tangible entity, containing the publisher's work to a reader. It is, therefore, relatively easy to acknowledge such sources.

The categorisation in the Collberg and Kobourov (2005) structure is similar to any other medium (paper, electronic, etc.) discussed above.

Is it academically honest to simply copy a bibliography into a publication?	Number
Yes	28
No	31
No response	11

Table 11: *Use your own work, and plagiarise only a bibliography*

Copying of an existing bibliography into a new publication could also be seen as putting unused references in your list of references. Respondents noted as follows: 40%-yes and 44%-no. It shows that students, when it comes to a broader and deep understanding of plagiarism as a concept do not know what is expected of them. A concern here is that no apparent set of guidelines could be detected among the students when they write their academic work. It is not academically incorrect to list unused references (which then become a bibliography instead of a list of references) but students do not know that.

The plagiarism of an entire bibliography could be classified as an instance of *blatant* reuse in the Collberg and Kobourov (2005) framework. It is plausible that most academics would not have that much of a problem with such practice.

Is it dishonest to ask someone to edit your work?	Number
Yes	2
No	57
No response	11

Table 12: *Rewrite the work for improvement by an editor*

Table 12 indicates that most respondents believe it to be not academically dishonest to get people to edit your work (81%). Some respondents said that editing might take on different forms, for instance a supervisor editing draft chapters of a student's dissertation. Some respondents also raised the issue of language editing by an expert, which, however, is an accepted practice.

A related problem is when an author rewrites part of a paper after it has been accepted but before the final version is returned to the conference chairs. One of the respondents in the Collberg and Kobourov survey felt that for certain parts of a paper this could be acceptable, e.g. rewriting part of the Introduction, cf: ‘This is something I’ve done to some extent [...] but the way I deal with it is by thinking that I’ll rewrite if the paper is accepted’. However, sometimes rewriting part of a paper after acceptance could be problematic, especially if some main results are omitted in favour of some less impressive results. The author could then reuse the main results to get another paper accepted at another conference. This sort of virtual reuse is not covered by the Collberg and Kobourov (2005) framework and could certainly form a new category.

Does your institution have a policy on plagiarism?	Number
Yes	4
Don't know	65
No response	1

Table 13: *Institutional policy on plagiarism*

In response to the question whether the University has a policy or not, 93% of the students reflect that they ‘do not know’. The understanding of plagiarism depends on the students. Straub and Collins (1990) state that policies are most effective when they include assignments of penalties and criminal liabilities to employees who violate policies for proper system use.

In line with the Collberg and Kobourov (2005) survey it might be an interesting experiment to ask of an author who submits to a conference or journal whether such author is aware of any plagiarism policy of the relevant conference or journal. For example, the ACM policy on prior publication (www.acm.org/pubs/sim_submissions.html) requires the new paper to be substantially revised. Collberg and Kobourov (2005) interpret this as being at least a 25% difference.

Is a student asked to sign the code of conduct?	Number
Yes	3
No	45

Don't know	10
No response	1

Table 14: *Ethics statement to be signed*

Seventy nine percent of the students claimed that they were not asked to sign the code of conduct. Of the 4% of the respondents who said 'yes', none of them could explain what the circumstances were or when they were given the code when the authors asked them.

		Gender	Usage of a graph without a Citation
Gender	Pearson Correlation	1	-.208
	Sig. (2-tailed)	.	.084
	N	70	70
Usage of a graph without a Citation	Pearson Correlation	-.208	1
	Sig. (2-tailed)	.084	.
	N	70	70

Table 15: *Correlation of gender and usage of a graph without a citation*

Table 15 presents the correlation between the gender and the usage of a graph without a citation. The purpose was to determine the relationship between gender and the usage of a graph without a citation. The results indicate a weak correlation.

		Year	Usage of a graph without a citation
Year	Pearson Correlation	1	-.357(**)
	Sig. (2-tailed)	.	.002
	N	70	70
Usage of a graph without citation	Pearson Correlation	-.357(**)	1
	Sig. (2-tailed)	.002	.
	N	70	70

** Correlation is significant at the 0.01 level (2-tailed).

Table 16: *Correlation: year and usage of a graph without a citation*

Table 16 indicates some correlation between the year and usage of a graph without citation. The values suggest that year (as a level of study) is related to the understanding of plagiarism, unless one is taught properly on how to acknowledge the sources of information. It is for this latter reason that Cougar (1989) states that he never thought ethics were something that could be formally taught. He claims that ethics is something you learn growing up at home, in school, and through religion. The findings in Table 16 indicate that the correlation is negative (-.357) and is significant at the 0.01 level.

Summary of Findings

In this paper we reported on the findings of a survey done on the viewpoints of students at a residential university regarding possible plagiarism scenarios. From the survey it became clear that students lack the knowledge to identify acts of plagiarism. Students find the underlying referencing policies confusing and they end up doing whatever it takes to get their work done. We also incorporated a previously developed framework (Collberg & Kobourov 2005) for analysing possible scenarios of self-plagiarism and we showed how the questions posed to the student sample became instances of the generic framework. Having observed these instantiations it is apparent that parallels may be drawn between on the one hand students using the literature without proper referencing and copying from their peers, and academics at the other end who reuse their own previously published work, also without proper referencing.

Research Questions

The research provided some answers to the 4 questions posed above:

1. When and how do students perceive copyright infringements?

The study indicated that students have insufficient knowledge about plagiarism as well as proper sophisticated mechanisms for assessing the academic work to determine whether there is any dishonesty involved or not.

2. Is this a problem at tertiary level (higher institutions)?

The authors found that the problem is not only at a particular residential university. Rather, it is ubiquitous, even in the business world. Clough (2000) gives an example of a programmer who worked for a company, later changed to another company and allegedly re-used previously developed software from the first company. The outcome of the case was that copyright was infringed.

3. What can be done to reduce these copyright infringements?

Much can be done to reduce the syndrome of plagiarism among *students* in a University; it is envisaged that all three the role players could make a difference in this regard. Academic institutions ought to have a plagiarism policy in place and students should be pointed to the existence of as well as the content of such policy. Lecturers and tutors should ensure that their students are taught how to do correct referencing. Students should also be made aware of what would happen to them should they be found guilty of such conduct. In one of the comprehensive ODL (Open Distance Learning) institutions a plagiarism note is added to the tutorial material sent to students. In there it is stated that they would be given a mark of zero should they be found guilty of plagiarising from either their peers or from the Internet. It is hoped that the serious expression shown by lecturers and tutors to the students will move students to understand that plagiarism is a serious offence in the university, one that destroys the value of their education. They have to start to respect writing procedures and the oral presentation of academic work.

The latest South-African Higher Education Qualifications Framework (HEQF) to be found on <http://www.che.ac.za/index.php> mandates the introduction of coursework on HIV/AIDS, poverty alleviation, etc. In the same way institutions may consider the introduction of coursework on plagiarism.

The problem of researchers who plagiarise their own work may be harder to address. Conferences and journals may consider providing guidelines as to what practices are considered as self-plagiarism, as well as measures that would kick in, in the event of clear-cut cases of self-plagiarism or reuse without referencing.

In all instances lecturers and reviewers of research publications could consider using any of a number of plagiarism software packages available, for example TurnItIn on <http://turnitin.com/static/home.html>.

4. Can the proposed framework for self-plagiarism be used to model the student survey?

The Collberg and Kobourov (2005) framework was developed to model self-plagiarism among researchers. It was, however, found that quite a number of the questions in the student survey fit into the said framework. It is not entirely clear whether this was to be expected or not. One could argue on the one hand that the issue is simply about plagiarism, be it students doing their studies or university lecturers publishing. In a way both these groups are trying to further their careers. On the other hand self-plagiarism and plagiarising someone else's work could be viewed as two very different procedures. Be as it may, it was found that some questions could not comfortably fit into the proposed framework; hence room exists to enhance the framework.

Future Research

Future work may be conducted in a number of directions. The student survey done at a residential university could be repeated among students at an ODL institution. These students are mostly part-time, working students who are older and more matured; hence it may be of value to see how their views would differ (if any) from those expressed by the full-time, younger students.

We indicated above that the Collberg and Kobourov (2005) framework sometimes did not address the questions we used in our student survey. In a way this could be expected, since their framework was developed for self-plagiarism among researchers. Nevertheless one could certainly investigate the possibility of extending their framework to include some of the additional issues addressed in our student survey.

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