

PERSPECTIVES ON TURNITIN USE IN AN AUSTRALIAN SETTING

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Abstract:

This paper reports the results of the 1st round of a qualitative study we have undertaken assessing student and academic views of the use of the originality checking software, Turnitin. The student populations targeted were both undergraduate and postgraduate. The academic population targeted included teaching staff across a range of disciplines. The polling was via email within which respondents responded to both closed and open-ended questions relating to their experiences of and attitudes towards the use of originality checking software. The aims of this study were to critically assess the experiences and attitudes of users (students and academics) of Turnitin and to test the utility of i-Maps in conjunction with formative use of Turnitin as a means to improve student originality. Journal literature relating to student originality and plagiarism was also analysed. This paper reports results from the initial rounds of data gathering. Data handling and analysis was managed with reliance upon Nvivo. The results show that the attitudes and experiences of academics can be readily categorised, student attitudes and experiences much less so. The current round of data gathering aims to bolster the number of student responses, and inform better categorisation of their experiences. A higher level issue that will be touched upon is how both students and academics conceive themselves in a virtual, distance education environment, with reference to Bourdieu's work.

Key words: Originality checking software, formative use; Originality checking software, academic and student views; Originality checking software, attitudes, Australia

1 Background

For the past two years we have been assessing both academic and student views of the use of originality matching software. In the instance of the University that employs us that software is Turnitin. We believe however the insights gained could be equally applied to the use of other systems such as URKUND.

Our concern with plagiarism flows in great part from the experience of one of the authors with their previous employer, the University of Newcastle (Australia). In the early 2000's that University seriously mishandled incidences of plagiarism by students in a postgraduate program in Malaysia (AAP General News Wire, 2005, Cohen, 2005a, Cohen, 2005b). To its credit, the University subsequently became something of an Australian leader in combating non-original work by students; though with the occasional "wobble" (Anonymous, 2011, Branley, 2011, SMH, 2011). We believe the role of the SACO's (Student Academic Conduct Officers) at the University of Newcastle to whom academics referred cases of deficient student writing, was one element in the success of their corrective actions. The methods they applied were not exactly the "public hangings" we have seen advocated in some of the academic literature (Kleiman and Kilmer, 2009), but we are sure the miscreants did talk after they were "thrashed" by the SACO's. The advantage of the crisis at the University of Newcastle was that the faculties had a ready mandate to enforce that all students had the opportunity to

check the originality of their work before the due date for their assignment came. In other words, iterative or formative use of Turnitin was mandated. Our belief is that this approach was central to the success of that university addressing student plagiarism. The number of referrals to SACO's peaked in the first year, radically declined thereafter, and in the very demanding 3rd year classes one of the authors ran he saw Bachelor students researching and writing like Masters students.

Commentators regularly refer to student plagiarism as though it is a single, specific type of action by errant students. It is far more helpful to think of plagiarism as consisting of a broad spectrum or continuum of student actions. Such a spectrum is offered below. At one end of that spectrum are actions such as students paying somebody else to write their assignments for them, or passing of another student's work as one's own. At the other end of that spectrum would be instances of students correctly citing the source of what they have written, perhaps even page numbers, but failing to acknowledge through the use of quotation marks that they have "borrowed" language from that source. In the following work our focus is upon the instances of plagiarism in the centre and right-hand side of the spectrum, which we see as being at best poor technique by the students concerned, or at worst a minor lapse in their judgement.

One aspect of plagiarism that is deliberately not assessed in this work is those instances that arise from students international backgrounds. The issues involved with these students are different in nature, though we believe that the formative approach to Turnitin use can be useful for this student body also.

2 How plagiarism is perceived

One of the problems with the everyday use of term "plagiarism" is that it suggests deliberate action, a conscious attempt to deceive the reader as to the source of ideas. Some definitions though don't distinguish between wilful and unconscious acts: Carroll describes plagiarism as "Passing off someone else's work, whether intentionally or unintentionally, as your own for your own benefit" (Carroll, 2002p. 9, cited by Pickard), (Pickard, 2006). It is these unconscious acts of plagiarism, still tainted by notions of deception on the students' part that are problematic.

As will be shown below in consideration of the spectrum of behaviours considered to be plagiarism, instances of what may be viewed as such misconduct may be far more helpfully construed as poor technique. Also, while plagiarism is seen as theft (Reilly et al., 2007, Sadler, 2007, University of New South Wales, 2013), it is a relatively victimless theft.

The relatively victimless nature of plagiarism may go some way to explain the perceived prevalence of the deliberate practice of this dark art. But, when it comes to the less conscious instances of plagiarism, those at the right side of the spectrum of plagiarist behaviour (see Table 1, Spectrum of plagiarist behaviours, below), it might be more helpful to the debate around plagiarism if those practices were instead characterised as poor academic practice.

The practice of paraphrasing is contentious, not just because it can be so difficult to detect, but also because some of the techniques for writing for both our post-graduate,

but especially our under-graduate students, is the generation of what has been characterised as the production of a “patchwork” of issues or ideas by students (Howard, 1999), asking them to demonstrate that they have read widely and understand the discipline within which they are working. Drawing on a study of research higher degree students, Pecorari makes a case for both some relaxation of standards, more acceptance of certain types of patchwork writing, along with stronger efforts to build understanding of the need for academic integrity in writing (Pecorari, 2003).

One critical view of the whole plagiarism checking and punishment routines so many universities now insist upon is that through the construction of plagiarism policy and procedures, we are simply tightening the boundaries around the “sacred space” that we academics work within. An early commentator, Scollon, (1995) sees the discourse around plagiarism as reflecting what a later commentator characterises as “a particular economic and ideological system, that of Europe at the time of the Enlightenment, and a particular view of authors as manufacturers of texts, but texts as commercial products.” (Larkham and Manns, 2002 p.4). Not only do academics work to protect and enhance their reputations as authors of works, they also willingly support publishers in the exploitation of a market focused on the notion of thought, or ideas, as property. In the terms of Bourdieu (Bourdieu, 1988, Bourdieu, Passeron, et al., 1994, Bourdieu, Saint Martin, et al., 1994), might academics be using the issue of plagiarism as a means of protecting our “habitus”? Within the sacred academic space of research and writing, the most senior and respected authors, through insistence upon correct citations and acknowledgment of previous work, extract “rent” from newcomers to the academic realm. And, it is literally rent, when funding to individual academics and their institutions may be tied to the frequency with which their work is cited, aka the “impact factor” of published works. As with those seeking to become medical doctors, where interns are required to work extremely long hours, and then face examination processes that act more to exclude candidates for entry to the specialist communities, ahead of reinforcing high standards amongst those admitted, might academic insistence upon the “purity” of student writing be nothing more than an exclusion mechanism?

Closely aligned with this is an Australian debate about the massification of higher education. The previous Australian Labor/left government had a long-term target that 40university places. The present (2015) Conservative Minister for Education expresses concern that uncapping university places has led to a decline in standards, an assertion given without any obvious evidence (Lane, 2013, Osborne, 2013). The authors have heard many similar comments from fellow academics in the course of their employment at four Australian universities.

It is debatable whether the current high levels of concern with student plagiarism are justified (Rolfe, 2011, Scanlon, 2003). Common perceptions of high levels of cheating aren’t always well-supported by the evidence, with estimates of the incidence of cheating ranging from as little as 9as 95age (Maramark, 1993). Besides the efforts of commercial originality checking software vendors to create a market for their services, there is a perception that “. . .the technology makes illicit cutting and pasting so easy as to be nearly irresistible” (Scanlon, 2003 p. 161).

Table 1

Spectrum of plagiarist behaviours

Type	Gross academic misconduct	Serious plagiarism	Mid-level plagiarism	Poor academic practice
Student instance	Using a paper prepared by a paper “mill” or “research service”	Copying and pasting from an internet site, journal or book, without attribution	Re-using a paper previously submitted for same or another course of study	Failing to put direct language use in double quotes, while giving the author citation
	Stealing another student’s work and submitting it as one’s own		Co-written papers from students working in groups, papers submitted as individual works	Inadvertent plagiarism, student failing to recognize after edits that the language used is not his/her own
	Finding a work on-line, submitting it for grading as one’s own work.			Failing to identify the source of key ideas used in submitted work
				Patchwork writing

Institutional responses to plagiarism

It is the experience of the authors that very little is done to expressly teach students at university level how to write in what we regard as an academic style. Compulsory systems that endeavour to teach academic integrity can become something of a “tick in the box” exercise for busy students, with little “embraining” of the concepts such programs are trying to convey. While self-help programs to assist original writing are offered, the evidence is that the uptake of these is at best patchy, as few as 36 will take advantage of such self-help programs (Brown et al., 2008).

A number of authors have dealt with addressing the issue of student preparedness for original writing at the university level, (Batane, 2010, Chambliss et al., 2010, Granitz, 2007, Jameson, 2009, Murray and Rowell, 2009), commonly citing the need for specific education to students in expressing themselves originally. A recurrent theme is that we, as academics, need to be imparting the values underlying an insistence upon academic integrity (Chamblisset al., 2010, Maramark, 1993, Reilly et al., 2007, Sadler, 2007).

Such an approach is worthy, but it has its limitations. As Wilhoit notes (Wilhoit, 1994), what students value most highly (friendships, personal career advancement, loyalty to a peer group), may be the source of those students breaching academic integrity. As one author prescribes, what is needed is a comprehensive, organisation wide approach, that “. . .[includes] transparency, ownership, responsibility, academic

integrity, compatibility with the institution's academic culture, focus on prevention and deterrence and support for and development of students' skills." (Park, 2004 p. 291). That's a very major commitment for any university to undertake, especially when it is composed of a number of schools and their associated disciplines.

The approaches universities may adopt in relation to academic integrity can be broadly categorised as investigative/punitive, deterrent and educative. We elaborate upon these approaches here because they link well to the findings of our research. A table, illustrating the authors' own spectrum of academic/institutional responses to plagiarism is set out in Table 2. The practices employed within these approaches tend to overlap to some extent. An obvious instance given is Turnitin use. While the authors' view is that it can be most valuable as an educative tool, there is no doubt that an institution's use of Turnitin can be a key investigative and deterrent tool, also (Braumoeller and Gaines, 2001, Kleiman and Kilmer, 2009). Each of these approaches to combating plagiarism will now be discussed.

The investigative approach is, as Wilhoit suggests, driven perhaps by outrage at student behaviour (Wilhoit, 1994). The preliminary data from this research also suggests that some lecturers derive some satisfaction from sleuthing (Parry, 2011), and that there is even an evolutionary predilection for us to pursue "cheats" (Fodor, 2000). Standards are broadcast, (apparently) made plain to all students, then originality checking programs, such as Turnitin are used to detect plagiarism, and bring students to account (punishment) for their behaviour. The investigative approach necessarily needs an institutional policy backbone, if it is to succeed. The maintenance of something like a student academic (mis)conduct register is an emerging practice, allowing a tracking of repeat offenders.

Investigation's natural partner is punishment. Punishment typically is underlain by policy, with extreme cases (theft and use of fellow student's papers, the use of paper mills), warranting harsher punishment than poor attribution of sources. The language of so much of the plagiarism literature suggests (and studies confirm) that academics do take the issue seriously but the proof of studies is that when plagiarism is detected, as few as 90% of plagiarists are punished (Burton and Near, 1995, Franklyn-Stokes and Newstead, 1995, Graham, 1994). Why so few students are brought to account for plagiarism isn't clear, but poor institutional guidelines and a lack of integrated approaches to combat the practice are commonly cited as reasons (Graham, 1994, Larkham and Manns, 2002, Park, 2003, Park, 2004, Walker, 1998), and recent Australian instances suggest that some top universities continue to struggle to respond properly to plagiarism (Visentin, 2015).

Deterrence has a lesser overlap with the investigative/punitive approach. What two commentators detail is, in essence, that "a few public hangings" will bring the rest of the population into line (Kleiman and Kilmer, 2009). In an Australian university setting it is not likely that punishment of breaches will be clearly visible to those other than the "guilty" party, but with sufficient notice to students of the consequences of breaching a plagiarism policy, it is probable that a deterrent effect will apply. Even if students don't have access to view their own Turnitin originality reports, it is likely they do take care to pass a largely invisible test (Braumoeller and Gaines, 2001).

There is a range of other deterrence measures that reportedly have effect. One of the obvious means is to pose assessment questions that require highly individual responses from students. With sufficient effort by teaching staff, all students within a course might receive a unique question that still might be assessed within a common framework.

Wilhoit (1994) details other deterrent approaches. One is to require that students submit drafts of their work, so that graders can get insight to the student's process of generating their final work. Another method advocated by Wilhoit is requiring students to submit photocopies of documented materials they used for the composition of their work.

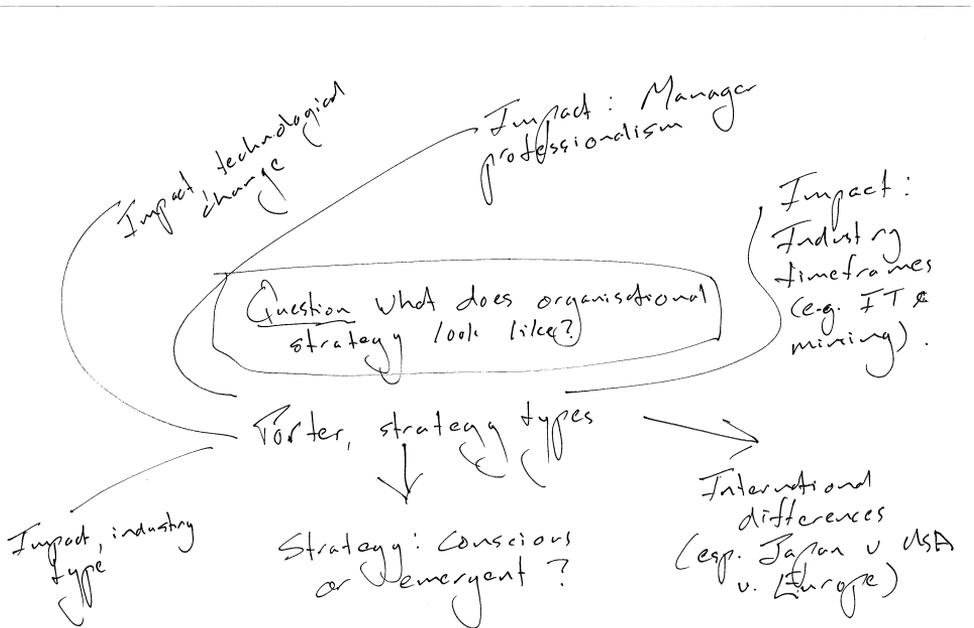
Also available is a more educative approach, usually relying upon specific instruction to students as to how to write original work. One of the problems of the mass education approach (especially if addressed at post-graduate students), is that the instruction given may be redundant. It is quite possible that the students have picked up elsewhere the necessary skills and knowledge. If instruction is given only on a remedial basis, an institution risks stigmatising the students they target, moreover the damage of plagiarism has already occurred.

Within the set of educative approaches are some that show high innovation. For instance, Walden and Peacock (2006) advocate that students be required to submit with their papers an "i-Map", where i = information. This is something of a mind map of how their inquiry into the answering of the question progressed. Not only does this require an original piece of work by each student, it also complements the development of reflexivity, a skill commonly called to be developed within students (Cunliffe, 2003, Edwards et al., 2002, Faifua et al., 2011, Johnson, 2003, Usher, 1996). An example of an i-Map is given on fig. 1.

While the use of i-Maps has been validated (Walden and Peacock, 2006), the formative use of Turnitin has only been lightly assessed (English and Ireland, 2008, Rolfe, 2011). What has been only lightly explored (or, explored and written to the teaching literature), is the combination of formative use of Turnitin along with specific efforts to ensure that students produce original work. Accordingly, the combination of formative use of Turnitin, along with the use of i-Maps to raise the originality of student's work is the focus of our research.

3 Research method

Much of the available literature relating to student plagiarism reports quantitative studies. There is a need for an investigation that is more exploratory in nature to tease out the finer elements of both student and academic experiences of the use of originality testing software suites. Accordingly, our research method has been reliant upon questionnaires sent to students and fellow academics. We posed a series of questions to which respondents can give open replies. We have been analysing those responses with reliance upon NVivo software, to identify emergent common themes within the responses. We have also undertaken analysis of the fairly abundant literature relating to student plagiarism, adopting a critical discourse analysis approach. We have used convenience sampling of both the student and academic populations at our



Campus. We did approach another university to be involved in this research, they declined, perhaps thinking that findings relating to the institution might be critical of their handling of instances of plagiarism.

We targeted a broad range of academics teaching within a broad range of disciplines, ranging from the humanities to engineering and physical sciences. As one of the authors oversees the use of the learning management system and its embedded use of Turnitin within this campus we could readily discern the academics who are allowing formative use of Turnitin and those who don't. Both authors have been advocates of the formative use of Turnitin for a number of years and have influenced many colleagues to adopt the formative approach to Turnitin use.

The formative use of Turnitin simply requires that when teaching staff are setting up a Turnitin assignment they make the choice to 1) allow students to view their originality reports at the time they submit their work, and 2) allow them to resubmit their work up until the assignment due date. This ability for students to resubmit papers enables them to fix mistakes in their attribution of sources. For such an approach to be viable, students need some instruction on interpreting their Turnitin reports.

The questions posed to staff were as follows: Do you allow students to see their own originality reports within Turnitin? Y/N. If "Yes", please you give your rationale for doing so.; If "No", please you give your rationale for doing so.; Do you allow students to re-submit their papers to Turnitin after receiving their initial originality report? Y/N, If "Yes", please you give your rationale for doing so.; If "No", please you give

Table 2

Institutional responses to plagiarism

	Investigation	Punishment	Deterrence	Education
Use of originality checking software	?	?	?	?(?)
Policy statements	?	?		
Compulsory completion by students of an academic integrity course of study		?(?)	?(?)	?
Optional completion by students of an academic integrity course of study			?(?)	?
Guidelines for students to write with integrity				?
Institutional tracking of “offending” students.	?	?	?	

your rationale for doing so.; In your experience, does Turnitin use improve students’ academic performance? Y/N.; If “Yes”, please you give a brief explanation of your experience.; If “No”, please you give a brief explanation of your experience.

The questions posed to students varied according to whether or not the lecturers employed a formative approach to Turnitin use. For the students that were allowed to resubmit their work before the due date of the assignment the questions were as follows: How useful was it to you to be able to see your originality reports within Turnitin?, and Did you use the opportunity to re-submit your work to Turnitin, after you had read your report and realised a need to improve the originality of the language you used?, And finally do you have any other comments re Turnitin use? For those students in classes where formative use of Turnitin was not allowed, the questions were adjusted accordingly. One of the complicating factors in the instance of survey students is that most of them have had experience of lecturers who employed both approaches, that is to say most students had experience of formative use of Turnitin and of courses where formative use was not allowed.

These question types generated quite extensive written responses from both teaching staff and students. Those responses were then analysed with reliance upon NVivo software.

The testing of the utility of i-Maps was conducted in an undergraduate course being delivered to Australian Defence Force cadets and midshipmen at the Australian Defence Force Academy. 92 students submitting tutorial papers over the past 2 years have been required to also submit what many people would recognise as “mind maps” of how they went about constructing those papers. Students were allowed to submit their i-Maps in either longhand form or in the diagrammatic form produced on a PC. In either instance the result had to reflect the content of the paper they have submitted

4 Results

In relation to the email survey of students and academics, to date, extensive responses capable of delivering analysis have been received from 28 academics at this Campus. As those responses can be readily characterised in the forms discussed below in this paper, further input from academics is not now seen as warranted. One outlying type of response that doesn't fit well in the analysis below is where academics have indicated that they don't allow students access to the originality reports at any stage for fear of them being frightened that they may have transgressed. This may be characterised as a fairly paternalistic/maternalistic view.

On the other hand, the polling of students is ongoing, as the diversity of responses is so large and there is relatively little congruence between the key messages or themes of those responses. In relation to the use of i-Maps, responses have been received from 92 students (all undergraduate) over the past 2 years. In relation to the survey of student views of Turnitin use, to date 23 responses have been received, mostly from postgraduate distance students. About 80% Australian Defence Force; the flavour of most of those responses is fairly legalistic, reflecting perhaps the process driven and legalistic nature of these students' workplace environments. We acknowledge that these very specific characteristics of our student population mean that our findings may not be readily extended to other student bodies, in particular to the experience of international students at other universities.

What is notable of the responses from both teaching staff and from students is the firmness with which views of the use of Turnitin are expressed and the obvious passion of the expression of those views.

4.1 Student responses

Student responses to the use of i-Maps have been positive. When asked of their use, typical responses include "the i-Map has been useful for me to organise my thoughts," and "by using an i-Map I have been better able to understand what I needed to reference within my paper". The tutors receiving the i-Maps report that the originality of the works they are grading has improved relative to the teaching of the course in previous years.

In relation to Turnitin, one typical student response was "I am of the opinion that by having it there as an option to look at, then there should be no excuse for plagiarism and that the defence of "it was an accident" cannot be used, because it is clearly evidenced and you have ample opportunity to correct it." Another responder noted "with [formative use of] Turnitin I have a chance to slap my forehead and make changes, instead of being accused of plagiarism, being kicked out of uni". A further response reflected annoyance at the inconsistency of practice of Turnitin use within a School, with some courses allowing resubmissions and others not even allowing students overview of the originality of their work, "I was conducting courses through the School of [XXX] I found that their use of Turnitin was far less robust with one of the courses not even offering a report". Many expressed enjoyment of formative use of Turnitin "[formative use of Turnitin] made the submission process much easier and less stressful", and "Using the originality report, I can view the highlighted areas that

have been used to justify my arguments. It has actually helped my writing skills as I identify improved referencing skills”.

4.2 *Teaching staff responses*

In the instance of those academics who do allow formative use of Turnitin, the following response is typical “I am strongly in favour of presumption of accidental plagiarism” and “[to not allow formative use of Turnitin] would be inconsistent with my philosophy that assessment is part of learning, not just a test of learning. I want students to reflect on the originality report as part of learning how to communicate effectively - a key graduate attribute”. Another response was “[formative use of Turnitin is] about them learning, not me punishing them for not being perfect the first time”. Another teacher responded noting “[Turnitin use is] . . . a relatively blunt approach to assessing student work and can lead to misperceptions and unnecessary worry for students if they consider their score too high” and “Allowing resubmissions until the due date allows a gradual process of improvement, . . .” Another academic responded “This rationale of “unintended plagiarism” supports the use of Turnitin as a learning system rather than as penalty system”, and “My experience has been that students really enjoy being able to self-assess and then to correct their referencing style.” A very senior and experienced academic reported “A very large number [of students] appreciated the opportunity to be treated as adults rather than potentially naughty children!” Finally, one exasperated academic responded that despite the availability of formative use of Turnitin, students: “. . . are still plagiarising, in greater numbers, and more stupidly than ever”.

Amongst those academics who don't allow formative use of Turnitin, the following response was typical: “We only need [students] to see [originality reports] if we decide there is a problem. The problem with the current unscreened [Turnitin use] version is that students who see it and are not at risk can panic.” Another academic responded very frankly as follows: “They never see the originality report unless there is a problem with it, so it doesn't have any opportunity to improve their performance in my courses.” Also, from another academic respondent “I dislike the use of plagiarism software and believe that university culture is ill-served by such technology. This is an ethical argument. Also, the use of this software only teaches real crooks how to lift their game and get away with it while it imposes a cost on the rest of us: efficiency and effectiveness argument.” A fear commonly expressed by teaching staff is that through recurrent “tweaking” of language, students might be able to “game” the system: “I do not wish to engender the culture of testing the system through small changes to determine its tolerance limits.” Another response was “I don't want students wasting their time trying to reduce their similarity percentage just for the sake of it.”

4.3 *Analysis of the literature relating to plagiarism*

Analysis of the literature relating to plagiarism is on-going; a provisional discussion has been given above in the “Conceptions of plagiarism” part of this paper. Our perspective is that the commentaries on plagiarism are predominantly punitive in their views, and reflect Bourdieusian “rent seeking”. One author who has addressed dealing with plagiarism with a formative approach to originality checking software is Vivien

Rolfe (2011). She asks “Can Turnitin be used to provide instant, formative feedback?” Reporting a study of an intervention with a class of 76 students, her general response was “yes”, but with a lot of qualifications. For instance, Rolfe found that the optional training in effective academic writing offered to the intervention group wasn’t widely taken up. Nor online advice in how to interpret Turnitin reports, the resource was seen as deficient, and not used by many students. Using a fairly limited sample (a single class); Rolfe identifies a need to integrate the formative use of Turnitin with other mechanisms to improve student originality.

5 Analysis

For those students who are allowed to see their originality reports, what we have found that is notable is that student responses have largely been along the line “this has really helped me in making sure that my expression is either original, or that the sources I’ve used have been properly attributed”. We would largely classify these responses as showing that students appreciate the chance to use Turnitin to build their writing skills. Others used our survey as an opportunity to criticise the inconsistency of academics as to whether or not they allowed students to see their draft Turnitin reports. In itself this raises a legalistic argument in favour of a consistency of approach by our University (or any university) in relation to the formative use of Turnitin. Several students made the point that if we as an institution make plain our referencing requirements, (again, a legalistic view), then the formative use of Turnitin is the fairest way for them to be sure that they have met those requirements. Any other approach is reminiscent of Kafka’s “The Trial”.

One of the notable characteristics of the respondents who didn’t allow formative use of Turnitin was that they overwhelmingly taught in the areas of humanities and social sciences. In the analysis given below, these respondents tended to fit within the “gotcha” camp.

In the instance of academics the responses we received are remarkably varied, aligning with the diversity of the literature relating to plagiarism detection and prevention. We see academic views as sitting in the following broad “churches”.

First there are the denialists. Denialists believe either that 1) the body of students they teach are highly moral and wouldn’t commit plagiarism, or 2) that the assignments they set have such demands that plagiarism is impossible for any student to commit, or 3) (more rarely), the incidence of plagiarism is so minor that it is not worth addressing. In relation to the denialists who believe that their students wouldn’t plagiarise, we work at a defence academy, all of our undergraduate population and the majority of our post graduate population are direct employees of the Australian Defence Force. Modern recruitment of midshipmen and cadets focuses upon personality attributes that in effect should minimise the incidence of corrupt behaviour such as deliberate plagiarism. Unfortunately, this effect is not always apparent. In relation to the belief by some denialists that the assignments they set are not open to being plagiarised, collusion between students in addressing the assignments and sharing language surely remains a problem; moreover some of the online services offering to complete assignments seem to be capable of addressing their minds to any assignment type. The

argument in relation to the 3rd point, that the incidence of plagiarism is so minor that it is not worth addressing, is a difficult proposition to respond to. The estimates of the incidence of plagiarism range from as little as 9% previously noted, most studies assessing the commonness of plagiarism occurring at the early part of the Internet age (Maramark, 1993). The presumption now is that "...the technology makes illicit cutting and pasting so easy as to be nearly irresistible" (Scanlon, 2003). Compounding the issue of assessing the commonness of plagiarism is the emergence of the various services designed to address the problem, such as Turnitin. A lot of higher education jobs now focus upon addressing and heightening student originality, few of those higher education employees would argue that the problem is minor. Just as the computer virus protection industry would die without the continuing threat of viruses, so the originality checking systems are highly reliant upon a perceived problem of widespread plagiarism.

Second are the "gotchas". These are the people who enjoy the chase, catching students out and punishing them for their misdemeanours. Indeed there seems to be an evolutionary predilection for us detecting "cheats" (Fodor, 2000, Parry, 2011, Purdy, 2005). A typical "gotcha" comment is: "It goes without saying that iterative [multiple] submission to Turnitin is a powerful tool in the hands of students who simply choose to cheat". The "gotchas" are perhaps driven by a deep sense of offence at what they see as immoral behaviour on the behalf of students. This deep sense of offence is well evidenced by the language of so much writing relating to student plagiarism, with laden terms such as "theft" and "cheats" (Faucher and Caves, 2009, Graham, 1994, Head, 2006, Marsden et al., 2005, Patel et al., 2011, Reilly et al., 2007, Sadler, 2007, Smith and Cervini, 2003, Sterngold, 2004, Williams et al., 2010). While most authors implicitly recognise the broad range of plagiarist behaviours, sometimes acknowledging those incidences on the right-hand side of the spectrum given in this paper, the prevalence and endurance of terms such as "theft" and "cheat" when examining plagiarist student behaviour casts a pall of moral outrage in the response to all types of non-original language use by students. It is this moral outrage that underlies so much of the writing in relation to plagiarism, giving rise to sometimes worthy prescriptions of actions designed to heighten student integrity. Associated are the efforts to inculcate within the student body higher levels of integrity and the development of values (Chamblisset al., 2010, Maramark, 1993, Reilly et al., 2007, Sadler, 2007). Our experience is that the "gotcha" camp is the natural home of academics who resent the massification of higher education and what they see as the steady erosion of standards within higher education. In Bourdieusian analysis this is the academic population that is most likely to endorse the rent seeking that lies at the heart of the requirement to properly reference sources.

Third are the skill builders. These academics are usually great advocates for the internal systems most higher education institutions develop to help students develop their own referencing skills, despite the evidence that the use and effectiveness of these tends to be very minor (Rolfe, 2011). Some of these academics see that with what is termed the "iterative" use of Turnitin, that is to say the chance to read their originality reports, amend their work and resubmit it, the students develop better means of identifying the bases of their arguments.

Fourth are the “legalists”. When we need to explain what the legalist approach is like, we make a comparison with our country’s tax system. We find it to be a useful analogy, in part because the language is very much the same. So, in the instance of filing a tax return we make claims for expenses that need to be substantiated by evidence (most commonly, receipts). Those claims for expenses will either be allowed or denied on the basis of 1) conformity to the taxation rules, and 2) the adequacy of the evidence in support of the claim for the expense. Thus, in the instance of students writing, the approach is to spell out for students all the standards of what constitutes originality in their work and how to attend to the attribution of sources, and then reward with grades those who conform best to those standards. It can be that simple.

6 Discussion:

Our work is on-going. While we accept that Turnitin and other originality checking suites cannot be “magic bullets”, (Warn, 2006), at the heart of our investigation is the fairly simple proposition that perhaps a consistency of allowing formative use of originality checking systems, coupled with the use of something as simple as i-Maps, might produce the needed behavioural changes needed in our student populations. This is presuming that any institution has a backbone of policy and practice that supports action in relation to plagiarism. Instances of successful approaches include deployment of student academic conduct officers responsible for helping dealing with “plagiarists”. We are finding that it is the combination of the skill building and legalist approaches that tend to yield the best results, the use of i-Maps identified above needs to be coupled with formative use of Turnitin and some specific instruction, probably at the course rather than the program level, as to why we require accurate identification of sources. Especially in relation to the use of i-Maps as a device to drive original expression of ideas amongst our students, we see a need in the future to switch our research to a more quantitative approach.

The issue of “correcting” the writing behaviours of some international students is doubtlessly more complex. Part of the reflexivity that we as academics need to develop is that perhaps what we see on their part as being plagiarist behaviour, with poor attribution of sources, might instead be homage to those authorities. That issue is probably best left to other authors. Also, we may need to reconsider the enormous cultural shift that we expect from some international students in relation to intellectual property. We expect such major change in the performance of international students, without considering what sort of changes we (native Western academics), should be making within ourselves and with our teaching practices.

At an institutional level, when trying to run a productive debate in relation to these issues we see a strong need to develop language in that debate that is constructive. Using blanket derogatory terms such as “deceit”, “cheat”, “steal” etc. injects a very dysfunctional element to the debate. That frustrates progress. One of the hard lessons of the massification of higher education is perhaps that we do need to develop more tolerance for lesser performing students, and some acceptance of patchwork writing.

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