

The impact that Turnitin® has had on text-based assessment practice*

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Abstract

This article explores the extent to which the use of the copy detection software *Turnitin* has impacted on, or transformed assessment practice at Massey University. Staff at Massey University have had access to *Turnitin* since 2004 and during that time they have, to varying degrees, developed a greater understanding of the issues of; authenticity, academic writing skills and subsequently assessment design. It was hoped that the use of *Turnitin* would have challenged academic staff to think more creatively about approaches to text-based assignments. Structured interviews were conducted with nine staff who have been using *Turnitin* for some time and who have a good understanding of its capabilities. They were thought to be the most likely to have made changes to their assessment practice. The findings from the interviews show that a strong reliance on detection and the “deterrent effect” has remained. Few staff have considered that alternative or other creative approaches to assessment are a better way of minimising plagiarism.

Two cases studies where alternative approaches have been explored and where improvements have been demonstrated are discussed in detail:

- Case study 1 involves enhancing the value of formative assessment by using some of the advanced assignment options in *Turnitin* namely; resubmission of assignments and students viewing their own reports online.
- Case study 2 describes subtle changes to the wording of the summative assessment in a *Communications in sciences* course that requires students to apply the theory to practice rather than simply reproducing the literature. The second component is the use of the information map or i-map (Walden & Peacock, 2008) which documents the research process that students have used to construct all their assignments.

The paper concludes that to effect a substantial shift in attitude amongst faculty in relation to plagiarism would require more than a single workshop on *Turnitin*, and that both professional development units and tertiary institutions as a whole need to consider a more holistic approach to issues around plagiarism, assessment and student writing.

Introduction

General approaches to the management of plagiarism by tertiary institutions have been extensively discussed in the last few years, although specific examples of how individual institutions are managing the problem, and the extent of the problem, are less well documented. In Australia, for example, the true incidence of plagiarism is unknown (Devlin, 2006), although a 2001 study shows that 80% of students report having plagiarised in some form or another during their studies (Handa & Power, 2005; CAVAL collaborative solutions, 2002). In New Zealand, attempts to quantify the issue are largely anecdotal (de Lambert, Ellen & Taylor, 2006). One of the reasons for this lack of specific information in both countries may be a reluctance to record and share such information in an increasingly competitive market, coupled with the outcomes of several high profile cases and their impact on staff and institutions. What is clear, however, is that in New Zealand 19 tertiary institutions including all the universities have licences for, and use, the text-matching tool *Turnitin*. Such a development suggests that, while there is no coordinated attempt to address plagiarism problems, many tertiary education providers are at least taking some steps towards grappling with this issue.

However, plagiarism is a complex issue; detection and punishment are only one aspect of the problem: assessment and education are equally vital. Devlin (2006) describes a strategy for resolving plagiarism that has four components: a collaborative effort across policy and staff; educational expectations relating to writing conventions; designing assessment that will minimise the opportunity to plagiarise; and employing a high visibility process for monitoring and detection. Similarly, Macdonald and Carroll (2006) describe a "holistic approach" to dealing with the issue of plagiarism in the UK context rather than relying on one specific component of detection, policy or punishment. The holistic approach requires equal consideration of three interwoven themes: ensuring that students receive the appropriate information and develop the necessary skills; ensuring assessment design is such that plagiarism can be minimised; and having the appropriate policies, procedures and guidelines in place to deal with any issues that arise.

Massey University does have elements of all three of the components described by Macdonald and Carroll; however, the extent to which these strategies are acting as a coherent whole is unclear. We have been using the text-matching tool *Turnitin* since 2004 and have to date submitted approximately 81,000 student assignments. In 2008, we have 145 active users of *Turnitin*¹. There is no organisational policy mandating the use of *Turnitin* although two departments in the College of Business mandate its use on all assignments. One programme of study (B Nursing) also mandates the use of the product across its entire three year programme. The University runs regular training sessions on how to use *Turnitin*, with a focus on education and detection. A new disciplinary process for all types of misconduct including academic misconduct was introduced in 2005.

At the same time, the University is concerned with ensuring that students have appropriate information and necessary skills to avoid plagiarism. We have an online learning resource, Online Writing and Learning Link (OWLL), that is available to all students, and contains sections on using secondary sources. Pre-degree courses focus on information literacy and attribution, and most colleges include some aspect of information literacy through a first year communication or writing course.

However, the second of Macdonald and Carroll's themes, i.e., ensuring assessment design in such a way that plagiarism can be minimised, remains a less documented aspect of the University's approach to plagiarism.

The merits of alternative, or varying, approaches to assessment for the purposes of reducing plagiarism have been well documented in the literature (see, for example, Hall, 2005; Alam, 2004). There is a plethora of literature discussing the use of *Turnitin* as an aspect of assessment (see, for example, Heikes & Kucsera, 2008; Cheah & Bretag, 2008; Sutherland-Smith & Carr, 2005; Goddard & Rudzki, 2005) and exploring how assessment can be designed to strengthen student writing in relation to the acquisition of academic voice (see, for example, Emerson, 2008; Hall, 2005); there is also a growing body of research describing how individual teachers have approached or adjusted assessment as a way of deterring plagiarism. These studies include Bloom (2008), who describes her development of “the plagiarism proof assignment”, and Ross (2008), on multiple assessment strategies as a way to combat plagiarism. A tool set of different options complete with their various strengths and weaknesses is provided by Race (1995). Keppel, Au, Ma and Chan (2006) describe their experience of the benefits of group work and peer assessment. Gijbels, Van de Watering and Dochy (2005) consider the impact of problem based assessment, while peer assessment of oral presentations is described by Langan et al. (2005).

However, there is very little empirical work which documents in any depth the use and impact of alternative assessment approaches as part of an holistic, institutional approach to addressing plagiarism. Crisp (2007), for example, in his staff survey related to a holistic approach to plagiarism, finds that 21% of staff report significantly improved assessment practices as a result of using *Turnitin*; however, the question asked of staff is very broad and the methodology used does not allow for any in-depth understanding of what staff mean by significantly, or what altered forms of or strategies for assessment were employed. Devlin’s (2003) account of a holistic approach to managing and preventing plagiarism identifies assessment as a key factor in plagiarism prevention, but focuses primarily on over-assessment as the problem to be avoided, rather than looking at assessment strategies.

This paper goes some way towards addressing this gap in the research, particularly in relation to assessment. The central question of this paper, then, is whether through using *Turnitin* with traditional textual written assessments, staff may have also adopted alternative approaches, such as changes to assessment methods or styles, to reduce incidences of plagiarism, and to encourage students to work effectively with secondary source material.

The focus of this project was to determine whether assessment practices have changed as a result of the use of *Turnitin* as a detection tool. The research investigates the extent to which the use of *Turnitin* impacts on assessment practice or design at Massey University.

Methodology

Turnitin is available to all staff at the University. In most cases, it is voluntarily adopted by staff; although, as stated above, some programmes mandate the use of *Turnitin* for all classes, this is the minority of users. Staff wishing to make use of *Turnitin* are encouraged to attend a training session on using *Turnitin* (although, again, this is not compulsory: users may simply contact the administrative staff member managing the service and be taken through the process of using the *Turnitin*).

The training session has two purposes and is run by two presenters. The first half is run by an academic staff member who has used *Turnitin* as an educational tool, within a learning context; the aim of this part of the session is to broaden staff understanding of plagiarism. The speaker presents *Turnitin* within an educational framework and discusses the research on the relationship between academic integrity and educational support, causes of plagiarism, and issues related to assessment. The second half of the session is run by an administrative staff member who focuses on

the practicalities of *Turnitin* use. Anecdotal evidence suggested that staff who adopt *Turnitin* at Massey University are largely motivated to do so by a wish to detect plagiarism and punish offenders (Emerson, 2008); however, by presenting detection as secondary to developing an educational context, the session aims to develop a broader understanding of the issues around plagiarism and how academic staff can work to avoid opportunities for plagiarism. Part of our interest in this study, then, was to see whether staff had taken on the broader educational context and whether they had adjusted their approaches to assessment in response to this broader perspective on assessment.

We used a qualitative approach comprising structured interviews and open-ended questions with nine of the high volume *Turnitin* users who were known to have a fairly good understanding of the text-matching tool, who have been using the service for two years or more, and who had attended a training session in previous years. Staff were asked a range of questions broadly based on the three aspects raised by Macdonald and Carroll with a greater emphasis on detection and its impact assessment rather than policy and disciplinary procedures.

The questions we asked were:

1. What motivated you to use *Turnitin*?
2. What is the level and type of copy detected?
3. What do you understand of the Massey University disciplinary process?
4. What educative assistance do you provide your students in relation to writing skills?
5. To what extent does *Turnitin* inform your current assessment practices or has *Turnitin* caused you to alter your assessment practices?

Following on from this general overview, two in-depth case studies of how *Turnitin* users have approached assessment redesign were developed.

Questionnaire results

As we had expected from anecdotal evidence, concerns about detection and punishment were the primary motivator for first using *Turnitin*. Seven out of nine users adopted *Turnitin* at least in part because of specific individual suspicions from previous experience. Two staff use *Turnitin* because their line manager mandated its use, and one staff member mentioned its use also to align their practice with colleagues. Only three staff choose to use *Turnitin* for teaching rather than detection purposes in that they allow students to see their own originality reports and/or they encourage draft submissions.

In relation to the amount of copy found, there are mixed views as to whether the level of copy is reducing as a result of using *Turnitin*. None of the staff who were primarily concerned with detection were able to confidently say that they thought that the overall incidence had reduced since the introduction of *Turnitin*. There was however a general view that high percentage of blatant copy had reduced, following its introduction. Eight staff were of the view that *Turnitin* has a deterrent effect. Some were quite adamant about this, while others were more cautious. Some thought it probably had an effect; however it is important to note that this perception is anecdotal: no specific project had been conducted to substantiate that view.

Two of the three staff who have utilised *Turnitin* primarily as an educational tool viewed the question of level of copy detected differently to those primarily concerned with detection. These interviewees stated that unacceptable copy in the first instance is possible; however, the final version of the assignment is invariably improved as the students learn through experience with draft submissions and reviewing originality

reports online, what is acceptable and what is not. Those students who do not take up the option of submitting draft assignments may fall back into the group with unacceptable copy. These students are described as those with poor time management skills who often do not do well. Although the number of staff using the educational approach is small, this is an encouraging finding.

Eight staff reported that cutting and pasting is the main type of copy detected. None of the interviewees had found students using cheat sites although they acknowledged the difficulty in recognising their use. Six staff said that they don't see much collusion although one staff member remarked that this strategy does attract the highest penalty.

Despite the majority of interviewees having a primary focus on detection, none of the interviewees showed in-depth understanding of, or familiarity with, the University's disciplinary process. As a consequence many staff have developed their own solutions. This situation is unsatisfactory and is probably resulting in the inconsistent application of penalties.

However, at present there is no procedure within the University for recording anything but the most serious penalties, so there is no way of ascertaining what penalties are being given. All interviewees did provide some sort of educational assistance to students in relation to their writing skills, and particularly in relation to plagiarism and use of secondary sources. All mentioned integrating material into their study guides or course websites. Two interviewees specifically mentioned that they work closely with a Student Learning Centre advisor. One of the surprising outcomes from these interviews however was the lack of knowledge about the OWLL, with two staff indicating that they knew nothing about this resource.

In most cases, assessment practice had not changed, or had changed very little since the adoption of *Turnitin*. Most interviewees still see unacceptable levels of copy and so continued to use *Turnitin* primarily as a detection tool. Careful rewording of assignment questions is now occurring in some instances to reduce the likelihood of plagiarism, but only in a minimal way. One interviewee commented:

It has confirmed for me the importance of thinking about how questions are set. In my case, it's not that difficult to set a question that doesn't lend itself quite as easily to plagiarism as might be the case in other courses. Depending on how a question is set up, while the likelihood of cutting/pasting from, say, a government website might not be reduced, students have fewer incentives to go to a cheat mill and purchase a response (as it's unlikely that there is one sitting there ready to be picked up off the shelf).

Overall, however, this was not the norm, and the findings here were disappointing. The results clearly showed that for the majority of *Turnitin* users, detection was their primary impetus for trialling *Turnitin*, and remained their primary focus, with very little flow on effect in terms of approach to assessment.

Case studies

Despite the overall findings relating to assessment being disappointing, two programmes did show some adjustment to assessment which had been influenced by the use of *Turnitin*. These case studies show a way forward for the University.

Case study 1: Nursing studies

The first case study involves the use of advanced features of *Turnitin* in two of the B Nursing first year courses. The summative assessment for these courses has not changed, but *Turnitin* is used in the courses as a formative assessment tool. In these courses, two advanced features of *Turnitin*, allowing students to see their own originality reports online and allowing draft submissions until the due date, are explained to students in a tutorial, and students are enabled to use these functions as many times as they need to prior to assignment due dates. The draft submissions are not marked and the paper coordinator only gets involved if requested by the student. Feedback is obtained directly from the reports generated automatically within *Turnitin*. If students have further difficulties with content they are encouraged to seek assistance independently from the Student Learning Centre. This approach mirrors the “student-centred approach” to using *Turnitin* as part of assessment, as described by Cheah and Bretag (2008).

In both courses in 2008, all students used these functions as part of their formative assessment. In one course, only 16% of students submitted their work more than once; in the other course only 5% of students submitted more than once. Only one instance of plagiarism was detected across both courses.

The students were described by the programme coordinator as uncertain about the process initially; however, a tutorial at the beginning of the course explained the tools and functions they have available. In particular they are assured that the process is private – no one else will see the reports generated. The programme coordinator comments:

To learn effectively, I believe that the student ought to be provided multiple ways to explore not only how they learn but the product of their learning – we need to get them to consider what their output is as they work to achieve the learning outcomes and Turnitin means that they can start examining their work critically before it is graded. Any opportunity for them to explore their work before submitting means they have the chance to improve it – this 'fits' with the graduate profile from the University and within our school – that they can think critically. So I regard Turnitin as a valuable tool to support the work I do.

Also, Turnitin is a very private forum for them initially – when you don't have much confidence in your ability as you start out in year one this is a place where you can submit your work and “see” what is going on. I reckon this is worth a lot to students as they can run it how they want to and it is not a lecturer who may be intimidating to them in the first instance.

It is encouraging to see formative assessment added into assessment procedures – and this is clearly a positive step for first year students. The positive outcomes, as described by the programme coordinator above, support the observations of Cheah and Bretag (2008) who describe the positive impacts of taking such a student-centred approach to the use of *Turnitin* as a way of strengthening students' ability to use secondary source material in their own writing. The next case study also focuses on first year students, but in this instance, major changes have been made to summative assessment through the use of *Turnitin*.

Case study 2: Communication in the sciences

Communication in the sciences is a compulsory first year course for all science students, with an annual enrolment of 700 students. The Course Coordinator developed an interest in *Turnitin* as an educational tool in 2004 due to concern over plagiarism (cut and pasting, and collusion) and about the overall information literacy of her students. As well as developing an educational framework around information

literacy, which incorporated *Turnitin* (see Emerson, 2008), the course coordinator describes two major adjustments she has made to assessment in the light of her work on plagiarism.

The first adjustment is ensuring the theory or topic of the assignment has to be applied to a specific context. These were her comments:

If you ask students to write an essay on the sustainability of organic apple production, for example, you are just asking students to cut and paste into what is in effect a literature review. Such an approach simply invites plagiarism, especially if students are working under time pressure or have poor time management. However, if you ask an assignment question that invites students to apply the theory to a practical situation, it is harder for them to plagiarise. So, I ask students to write a report rather than an essay, and the question becomes "should the New Zealand government be promoting organic apple production as part of sustainable pipfruit industry". The impact of this is two fold. First, students can't simply repeat what other people have said: they have to engage with the material at a higher cognitive level. And second, it would be far harder for them to plagiarise and meet the requirements of the assignment. Thinking about plagiarism because of Turnitin made me really consider how assessment works and what I want my students to be able to do: which is to engage with the literature and think about it in an innovative manner.

The second approach that has been taken in this course is the introduction of an information map, or i-map (Walden & Peacock, 2008). For all assignments, students have to produce an i-map which documents their research process and includes short annotated bibliographies. This visual representation of process encourages students to become more aware of using an appropriate research process and engaging critically with secondary sources. It also means, according to the course coordinator, "that plagiarism becomes more effort than it's worth: inventing a fictitious i-map would require considerable energy and imagination!" The i-map is worth 20% of each assignment grade and ensures students can not simply conduct a google search and cut and paste material into an assignment.

The course coordinator is very positive about these changes:

Using Turnitin really made me think about assessment. I was concerned about plagiarism in my class – we'd had some really bad cases. But since I teach first years, I was uncomfortable with simply penalising students for lacking skills that they may have never been taught. So, I teach those skills now, and I have developed assignments which make students engage more fully in the research process and with reliable secondary source material – and which encourage them to really think about their topic.

Discussion

It is clear from these results that *Turnitin* was initially adopted by almost all of our sample because of concerns about detection – and despite *Turnitin* being introduced within an educational framework, detection remained the primary focus of users. All users do make some attempt to provide a supportive educational framework for students, but only two interviewees were actively approaching assessment (either formative or summative) in a different way because of their use of *Turnitin*. These findings are comparable with those of Heikes and Kucsera (2008) who observe that, despite a focus on educational development in relationship to *Turnitin*, users focused primarily or solely on *Turnitin* as a method of detection.

If we take a broader perspective and consider how these results correlate with the holistic models proposed by Devlin (2006) and Macdonald and Carroll (2006), then we note that, while present users are providing the educational framework and information to enable students to avoid plagiarism, there may be a problem both with approaches to assessment and also with institutional features such as staff understanding of policies and procedures relating to plagiarism².

Clearly more research is required in the area of using assessment strategies to reduce problems of plagiarism – for example, more empirical research which establishes the effectiveness of “plagiarism proof” assignments. More research is also needed on how an institution might effectively introduce *Turnitin* in such a way that encourages faculty to take more than a simple detection approach to the matter. Given, as this study shows, that staff usually adopt *Turnitin* because of concerns about detection, how do we effectively shift their attention to a broader perspective and a wider range of strategies? As Hall (2005) puts it, how do we move the question from “how can we catch them” to “how do we prevent plagiarism?”. In this study, *Turnitin* was presented in a broader framework, but we were unsuccessful in effecting broader change in faculty approaches.

We can only speculate about why we were unsuccessful in achieving faculty change. But a key issue which is deeply significant to the problem of plagiarism, and may be relevant here, is the question of responsibility. Strategies that focus purely on detection see responsibility for plagiarism as located solely in the student (Roy, 1999). Strategies that combine detection with changes in assessment see responsibility for avoiding plagiarism as a shared responsibility between the teacher and the student:

What if some plagiarism results from a breakdown in the feedback loop between instructor and student? If the task is unclear, or it calls upon learned competencies which the student in a given population may not reasonably be assumed to possess, then the instructor may bear some of the responsibility. (Hall, 2005)

We may need to consider how to shift faculty positions as “gatekeepers” (Howard, 1999) and enable them to take more responsibility as educators.

If we see the question of responsibility as a key issue, then approaches to introducing *Turnitin* may need to change. A one hour workshop on the educational issues relating to plagiarism joined to a one hour workshop on how to use the technology may not be enough to shift entrenched faculty attitudes to where responsibility for plagiarism lies; indeed, the second part of the workshop may completely overshadow the earlier material. This has implications for professional development units, who are likely to be charged with developing workshops on how to use *Turnitin*, but also has implications for the broader University in terms of how it perceives the nature and causes of plagiarism, how it frames its disciplinary approach, and how it inducts students into the complex process of academic writing.

Conclusion

This study shows that at Massey University, academic staff who adopt *Turnitin* are unlikely to adjust their assessment procedures as part of a strategy for addressing plagiarism: instead, they are more likely to see detection as the critical issue, and to consider detection strategies as sufficient to meet a perceived problem. Only two of the staff we interviewed had taken a more creative approach, either using *Turnitin* as a formative assessment strategy, or adjusting their assessment strategies both to make plagiarism less likely and to educate students about academic literacy. The literature shows that detection in itself – or combined with instruction – is not sufficient to address the issue of plagiarism. Our research suggests that, without substantial

direction or encouragement, academic staff who are concerned with plagiarism are unlikely to adopt multiple educational strategies or to make adjustments to assessment strategies. Clearly, then, universities need to take a considered and active role in encouraging a more holistic approach to plagiarism.

End notes

*This is a revised version of our paper of the same title, presented at the 3rd International Plagiarism Conference, Northumbria University, UK, 23-25 June 2008.

¹We have 234 staff logged onto our *Turnitin* account, but 89 of these staff or 38% have never used the product; the reason for this is unknown.

²The latter is not unusual in tertiary institutions (see Sutherland-Smith, 2005)

Author biographies

Malcolm Rees graduated with a MPhil in Quality Systems in 1999 and is currently employed as the Academic Quality Manager at Massey University. Part of this role includes the administration of text-matching programme for the University. The nature of the position also requires some involvement with policies and procedures relating both to academic misconduct and assessment practice. He has presented a number of workshops relating to text-matching and is currently involved with strategies to enhance the deployment of text-matching at Massey University through a new Learning Management System.

Lisa Emerson is a senior lecturer in the School of English and Media Studies at Massey University. She has won many teaching awards, including the Prime Minister's Supreme award for tertiary teaching, 2008 and the Darrylin O'Dea award for e-learning. She teaches academic writing, and writing for science and technology. Her research includes work on e-learning, teaching excellence, writing to learn, action research, and plagiarism.

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