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Student perceptions of the value of Turnitin text-matching software as a learning tool.

Abstract

The University of Wolverhampton has been using Turnitin as a teaching aid with groups of students since 2007, but in 2011 changed its policy to encourage student access on a formative basis across the institution. In one School, 748 students undertaking final year undergraduate projects were invited to check multiple drafts via Turnitin before the final deadline. Use of the software was monitored, and students were invited to express their views on its value as a learning tool.

Uptake was substantially higher where Turnitin was introduced within a module than through extra-curricular workshops. The number of draft resubmissions was greater than that reported in other studies. Most participants thought that despite certain limitations Turnitin was helpful in learning about appropriate source use, and wished it had been introduced earlier in their degree course. Given that the participants were in their sixth undergraduate semester, a surprisingly high number expressed anxiety regarding the risk of unintentional plagiarism.

Keywords

Academic writing, writing from sources, paraphrase, plagiarism, Turnitin

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Introduction

Academic writing is a challenging venture, especially when writing from sources. It involves reading widely yet selectively, understanding and questioning what we read, and weaving together multiple authors' voices with our own, indicating both their relationships to each other and how they have influenced our own thinking on the topic. When writing for scholarly publication, we engage in conversation with our academic peers; thus it is of crucial importance that we correctly represent and attribute each other's views.

Student writing follows a similar process but has a rather different purpose. When teachers set written coursework, they hope that by reading and writing students will develop not only their knowledge but also their thinking and communication skills. However, a key function of student writing is assessment of said knowledge and skills. The student writer has a limited readership (their assessor and possibly moderator), and conversation is restricted to tutor feedback, often with little scope for student response. Baffled by sometimes inexplicable and apparently contradictory exhortations to read more widely yet be selective, to 'use your own words and ideas' yet provide a citation for every statement, novice writers may find themselves engaging in a 'hollow simulacrum of research' (Jamieson and Howard, 2011b:n.p.). This can include behaviours such as falsification of references, copy-pasting citations to sources the student has not read, and what Howard, Serviss and Rodrigue call 'quote-mining (2010:186), all in the belief that more references will placate the lecturer and lead to higher grades (Harwood and Petric, 2012; Ellery, 2008).

This article will explore student perceptions of the text-matching software Turnitin. Because Turnitin is commonly employed to detect inappropriate textual borrowing (Badge and Scott, 2009), studies on its use often commence with a discussion of plagiarism: its incidence, causes and solutions. Since we will be focussing on the use of Turnitin in developing academic writing skills, we begin by examining some of the challenges students face when writing from sources.

Although most students now arrive at university with some grounding in information technology, recent studies suggest that young Internet users, while confident with the technology, are less competent when it comes to sourcing and critically evaluating online information (Bartlett and Miller, 2011). In Higher Education, this reveals itself as a tendency to depend on sources which educators may consider insufficiently reliable or 'academic'. For example, the Citation Project's analysis of 1,911 citations from 174 first year undergraduate composition papers identified that 44% of citations were to sources of 4 pages or less, including 17.9% general news texts (Jamieson and Howard, 2011a). While students are likely to access increasingly authoritative sources as they progress through their studies, Judd and Kennedy found that even in their final year students were relying on Google and Wikipedia 41% of the time, and only 40% of the sources they accessed via Google

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were classified by the authors as highly reliable (2011:355-57). Similarly, iParadigms relate that of 112 million content matches in 28 million student papers submitted to Turnitin between July 2011 and June 2012, 43% were to 'sites that are academically suspect, including cheat sites and paper mills, shopping sites, and social and user-generated content' (2012:3). The most popular source, representing 11% of all matched text, was Wikipedia.[1]

A further finding of the Citation Project is that a high proportion of citations were to the first page of a source (46%) or to the first three pages (77%). This, coupled with the lack of summary (most of the citations were quotations, sentence-level paraphrase or patchwriting) suggests to Jamieson and Howard that students were 'not engaging in texts in meaningful ways' but cherry-picking useful sections (2011a:4).

The term 'patchwriting' was coined by Howard in 1992 to denote "copying from a source text and then deleting some words, altering grammatical structures, or plugging in one-for-one synonym-substitutes" (Howard, 1992:233). While some assessors judge this to be a form of plagiarism, Howard argues that it should instead be considered a "valuable composing strategy" enabling the novice writer's "manipulation of new ideas and vocabulary" in an unfamiliar discourse (ibid). This view of patchwriting as a learning strategy is confirmed in Pecorari's study of postgraduate student writing (2003). Investigating the influence of mother tongue, Keck (2006) found that L2 writers were more likely than native speakers to use 'Near Copy' as a textual borrowing strategy. However, she also noted that both L1 and L2 undergraduates made significant use of 'minimal revision' paraphrase in their writing (275-6). This may be partly due to confusion over what constitutes acceptable paraphrase (Zimitat, 2008). Yet native English writers may, like users of English as an Additional Language (EAL), lack the vocabulary, background knowledge, inferencing ability and fluency with academic discourse to construe complex texts 'in their own words'.

Higher Education Institutions have numerous ways of helping students develop their information literacy and academic writing skills. In addition to course guidance documents and academic writing tuition (both embedded and extra-curricular), many institutions have developed online tutorials on academic writing from sources, and some are commercially available.

One tool which is becoming widely adopted in teaching academic writing is the text-matching software Turnitin, which compares uploaded text with documents in its database (including webpages, academic articles and previously uploaded student papers), then generates an 'Originality Report' highlighting potentially copied material, linked by colour-coding to its possible source. Numerous studies now document Turnitin's use as a teaching aid: with first-year undergraduates (Ireland and English, 2011), postgraduates (McCarthy and Rogerson, 2009) international and dyslexic students (Davis and Yeang, 2008), students on Distance Learning programmes (Hunter, 2012) and transnational degrees (Cheah and Bretag, 2008). Some studies employ a 'self-service' approach (Rolfe, 2011) whereas others highlight the desirability of tutorial support (Davis and Carroll, 2009). In some cases students have a single opportunity to access the software (Whittle and Murdoch-

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[1] Of course, the match identified by Turnitin is not necessarily that used by the student.

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Eaton, 2008); in others they can upload multiple times (Stappenbelt and Rowles, 2009). While the above all explore the use of Turnitin Originality Reports as a visual aid in demonstrating in/appropriate source use, other studies evaluate additional functions of Turnitin such as its peer review feature (Ledwith and Risquez, 2008) and online feedback tools (Chew and Price, 2010). Most of the case studies involve relatively small numbers of students but some focus on large cohorts (Flynn, 2010) or document institutional approaches (Gannon-Leary, Trayhurn and Home, 2009; Graham-Matheson and Starr, 2013). This article discusses a case study involving 748 undergraduates writing final-year projects at the University of Wolverhampton in 2012.

Background and methods

The University of Wolverhampton (UK) acquired its first Turnitin licence in 2007. Initially, use was confined to detection of plagiarism on a 'suspicion-triggered' basis (Rowell, 2009), with a limited pilot exploring its value as a learning tool with students on English as a Foreign Language modules. In 2011 the policy was changed to require submission of all final-year undergraduate projects and postgraduate dissertations on a 'screen all' basis (ibid), and encourage more widespread formative use.[2]

Within one School, two final-year project module leaders (Law and Social Policy) volunteered to trial Turnitin as a learning tool. Students were asked to upload one draft of a low-stakes (Law) or no-stakes (Social Policy) assignment (a section of their project) in January 2012. After receiving feedback they were then encouraged to upload multiple drafts up to one week before submission of the final document in April. For the sake of equity, students on project modules in other subjects were invited to attend a freestanding Turnitin workshop in February and could subsequently upload multiple drafts until the April deadline. After submitting their project (but before receiving the results) six students who had attended the freestanding workshops were interviewed about their experience of using Turnitin. Clearance was gained from the School's Research Ethics Committee to publish data from the workshops and interviews, and all participants signed a consent form. Participants were reassured that their drafts would not be stored in the Turnitin repository and that they would not be penalised for any work uploaded into Turnitin which showed a high percentage of matched (i.e. non-original) text, but encouraged to seek help from their tutors and academic skills advisors if this were the case. Interviewees were able to check and comment on their interview transcripts before these were incorporated in the study.

The freestanding workshops were modelled on a 'consensus conference' approach (Cureton 2012): a cumulative process whereby participants are presented with a prompt (task or information) for discussion in the whole group before the next prompt is introduced. Because we expected larger numbers of participants than typical for a consensus conference, we invited students to respond to each prompt individually via the virtual learning environment (VLE) survey tool. Comments were then

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[2] For further information on university policy and practice, visit www.wlv.ac.uk/turnitin

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anonymously displayed to facilitate further whole-group discussion. The sequence of workshop activities is outlined in Figure 1. Raw data from the workshop surveys (mainly in the form of free-text responses) were independently analysed by the two researchers to establish themes and sub-themes. Once these were agreed, the researchers independently coded each response. Salient quotations from the surveys were used to guide the semi-structured interviews.

Time (0-90 minutes)	Activity
0-10	Introduction to workshop; disclosure of research aims and data collection methods
10-20	Log into VLE topic. Discuss concept of plagiarism and complete Survey 1: what do you think about plagiarism?
20-40	Write a plagiarised essay from a list of suggested topics
40-50	Overview of Turnitin (PowerPoint presentation)
50-55	Survey 2: your views and expectations of Turnitin (before use)
55-70	Setting up Turnitin accounts and uploading work (plagiarised essay and actual assignment drafts if available)
70-75	Discussion of Originality Reports on plagiarised essay (prizes for 'best' examples)
75-80	Survey 3: your experience of and concerns arising after use of Turnitin
80-85	Response to concerns raised in Survey 3
85-90	Survey 4: reflections (own experience, University policy, and workshop evaluation)

Figure 1: 'Introduction to Turnitin' workshop structure.

Findings

Student uptake

There was a marked difference in uptake between students who were introduced to Turnitin in the context of a taught module and those who were invited to attend free-standing workshops. As shown in Figure 2, 76% of Social Policy students and 78% of Law students uploaded a sample of their writing for a no-stakes/low-stakes mid-module assignment. Of the 468 students on other project modules who were invited to attend an Introduction to Turnitin workshop, only 62 did so and a further 60 logged on to Turnitin via the VLE after the workshops had ended. A smaller number overall proceeded to check project drafts in Turnitin, but the uptake was still much greater among Social Policy and Law students than among those taking other project modules.

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Project module	Number of students on module	Number who uploaded trial sample	% who uploaded trial sample	Number who uploaded project draft	% who uploaded project draft
Social Policy	37	28	76%	14	38%
Law	243	190	78%	86	35%
Other	468	102	22%	71	15%

Figure 2: Number/percentage of students who accessed Turnitin.

Figure 3 illustrates the date on which students uploaded their penultimate project draft. As might be expected, there was a rush of submissions shortly before the 16 April cut-off point, with 8 Social Policy students, 32 Law students and 29 on other project modules uploading drafts on the formative deadline. However, because we were using the overwrite option for generating Turnitin Originality Reports, we do not know when students submitted their first draft. Those who checked multiple drafts may have begun the process quite early.
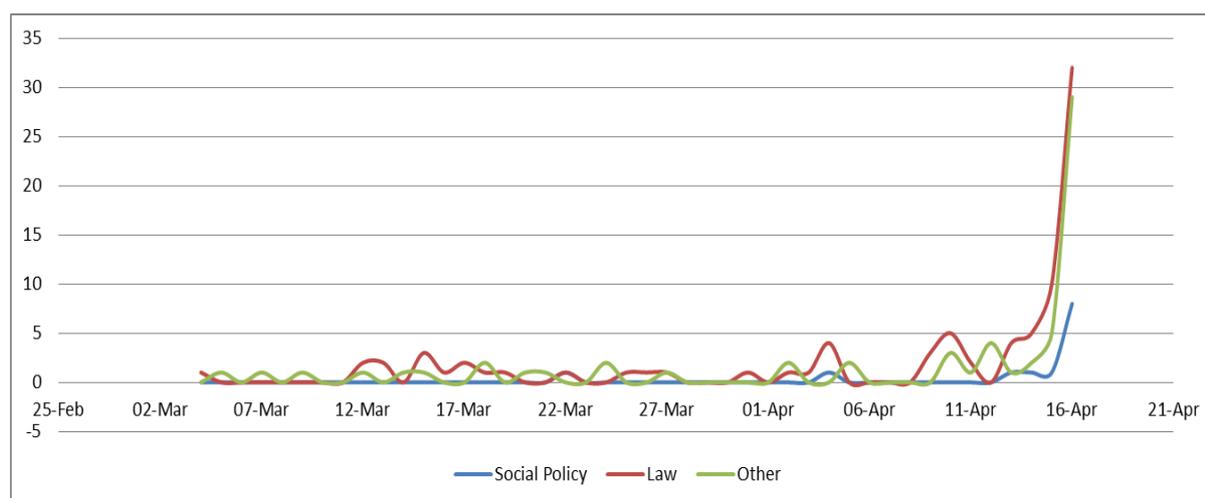

Figure 3: Date on which students uploaded their penultimate project draft.

As can be seen in Figure 4, the majority of students who uploaded a project draft did so on fewer than five occasions. A small number of students uploaded many times. The highest number of submissions by a Social Policy student was 29; one Law student uploaded 16 documents; and two Other students uploaded 12 times. The total number of uploads by the 171 students who submitted 'project drafts' is 515, resulting in an average of 3.01 per student – far higher than the 1.18 per student reported by Wright, Owens and Donald (2008).[3] However, because we were using the overwrite option in Turnitin, we do not know WHAT students were submitting. There is evidence (from screenshots of the assignment inbox taken at irregular intervals during March and April) that some were uploading work from other

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[3] Based on 914 postgraduate assignments

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modules, or on behalf of other people. For example, a student called Kerry uploaded a piece titled "Dave's work" (names changed). Other submission titles included "philosophy coursework" and "family module, final essay".
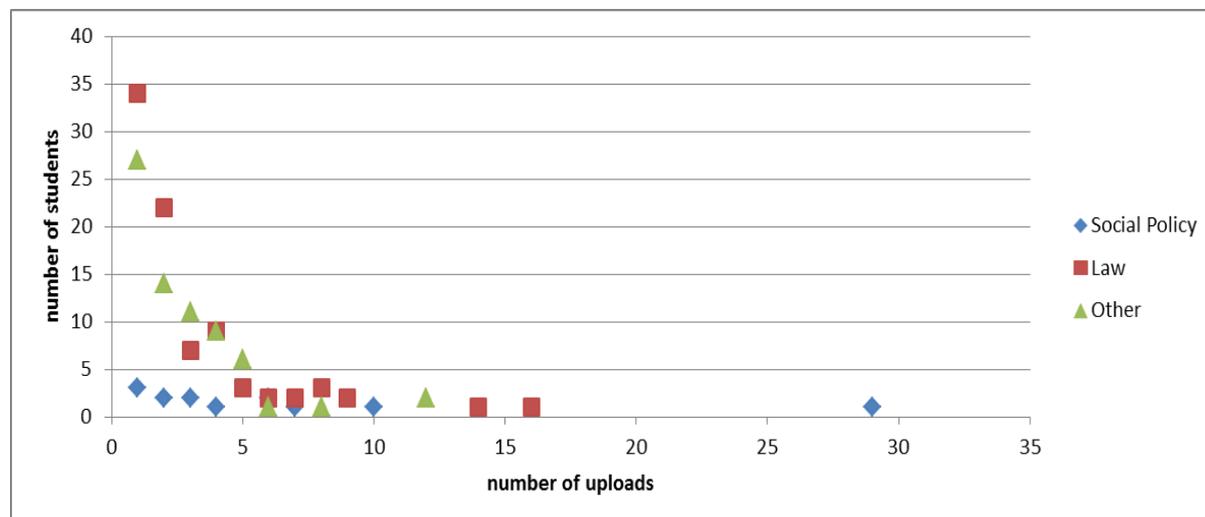

Figure 4: Number of draft uploads per student.

Student perceptions of Turnitin

Student comments below are gathered from the 62 workshop participants and the six students interviewed in May. Although views were sought regarding plagiarism, assessment, and the use of Turnitin in plagiarism detection, in this article we focus solely on students' remarks regarding the use of Turnitin as a learning tool. Slips in spelling and punctuation have been corrected where these might give rise to misunderstanding.

1. Benefits

Twenty-five comments touched on the usefulness of Turnitin in checking work, (in particular referencing, proportion of quoted matter, and quality of paraphrase) and improving writing overall:

> *It's a good idea as it will encourage me to draft and redraft my work until I feel I am satisfied with it.*

> *It's a good way of making sure my final project doesn't contain too much text from sources and making sure there aren't too many quotes.*

In common with other studies (Graham-Matheson and Starr, 2013; Hunter, 2012), there were several allusions to the risk of inadvertent plagiarism. Some comments revealed rather unrealistic expectations of the software: 'I welcome the chance to

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check if my referencing is correct'[4] and 'The software will be useful … if you wish to quote from a source but cannot remember the title or author.'[5]

2. Limitations

Forty-three survey responses mentioned the limitations of Turnitin, reflecting both the content of our introductory presentation and students' experience during the workshop. One concern was the reliability of the Turnitin database: 21/52 students said the software did not identify all the sources used in the plagiarised essay, and 13/43 said the Originality Report showed less matched text on their assignment draft than they had expected.

> *As it is a finite catalogue I am slightly concerned as to its credibility. As you can not be totally at ease with what you have submitted.*

There was some confusion arising from the fact that Turnitin did not necessarily identify the source used by the writer:

> *It got its sources wrong, and suggested I plagiarised some of my own work, which I didn't.*

And despite our careful explanations during the presentation, some students complained about the fact that Turnitin highlights quotations and common expressions:

> *it does seem rather confusing e.g. still highlights text if you have referenced correctly.*

> *as it is only a tool that matches text, it may highlight general text that will obviously be found elsewhere*

One of our interviewees (who made six uploads in total) commented:

> *I think there's good help for your writing skills more than Turnitin. It only shows you if you've poorly referenced but it doesn't tell you how to restructure your work or how to put your sentences together and no, I don't think it would help your writing skills.*[6]

The above concerns resulted in a degree of ambivalence regarding the software:

'I think it could be better, obviously needs a bit of tweaking but it does some sort of job' and (our personal favourite) 'It's good but not excellent.'

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[4] Although Turnitin will indicate unattributed source use, it cannot 'check' citation formats or conventions. See also Tulley-Pitchford (2012:66).

[5] The source identified by Turnitin may not be the original text.

[6] This mirrors the findings of Penketh and Beaumont's (2013) study involving first-year undergraduates.

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3. Feelings

The survey responses contained a high degree of emotional language, ranging from negative (worry, stress, pressure, fear of failure, nervous, alarming, paranoid, panic: mentioned in 19 responses) through ambivalent (confused/confusing: 5 responses) to positive (peace of mind, reassurance, beneficial, relief, safety, confident, fun: 17 responses). In general, the negative emotions related to initial fears (of the unknown, of technology) before using Turnitin, which changed to reassurance after use. One interviewee explained:

> *I think at first I was really paranoid; I was thinking 'Oh my god, I've put lots of quotes in; it's going to come up a massive percent; I'm going to get in trouble …'; I was really worrying, and then I put a piece of work through and I waited for the result, and I was like, 'Come on: process, process…' 17% … I went, 'Phew!!!' and then, as I looked at Turnitin … it was really reassuring to be able to go into the programme and see how it works. So I think I went from one end of the spectrum to the other!*

To an extent the timing of the Turnitin workshops (two to three months before the final project deadline) was a factor in the negative responses:

> *I am really stressed about using Turnitin as I am worried it will flag up plagiarism due to my lack of referencing skills, so I need to brush up on them quickly and feel I am under enough pressure without this being introduced. Earlier would have been better as now we are all in our final year and have the pressure of time constraints and the fear of failure at this stage is now enormous.*

4. Timing of access

We asked workshop participants at what study level they thought students should be able to access Turnitin. Figure 5 depicts the 69 responses (41 students answered this question). Most participants thought Turnitin should be introduced earlier in their undergraduate programme; this was reflected in the free-text comments:

> *should really be used from day one at university and students would be familiar with its use then by final year*
>
> *Wish that I had been able to use this earlier in my course.*

It is worth noting that not everyone thought Turnitin should be available to first-year students:

> *I think [the first year is] a bit too early because, like, you've just started uni and you're getting used to handing all your [assignments] in and then, once you're used to it, you can do it in the second year.*

Of interest are the two respondents who thought that Turnitin should never be used. Because the surveys were anonymous, we do not know the reasons for this response. However, some strongly negative views regarding Turnitin were expressed during the workshops by two students who were 1) highly anxious about

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its use for plagiarism detection on the final project; 2) concerned about the confidentiality of sensitive data, given that the final project would be stored electronically outside the UK.

At what stage do you think students should be able to access Turnitin? (please tick all that apply)	
first year of degree course	28
second year of degree course	14
final year of degree course	15
postgraduate study	10
never	2
No Answer	0

Figure 5: Student recommendations regarding timing of Turnitin access

Discussion

Three puzzles emerged from our data. Firstly, why did so few students take advantage of the opportunity to check their project drafts via Turnitin? Secondly, were those who did using Turnitin (as is sometimes claimed) to 'beat the system' (Wright, Owens and Donald, 2008)? Thirdly, why did so many final-year undergraduates express concern about the risk of unintentional plagiarism?

Why did so few students check their project drafts in Turnitin?

Both researchers felt that Turnitin can be a useful visual aid in demonstrating in/appropriate source use so we were surprised, and somewhat disappointed, that so few students took the opportunity. There also appeared to be a disparity between the proportion of those who thought students SHOULD have access to Turnitin (39/41 survey respondents, i.e. 95%) and the number who actually did. Of the 748 students offered access to Turnitin in the final year of their degree course, 320 (43%) uploaded a trial document and 171 (23%) uploaded project drafts.

One possible reason for the low uptake is that students were confident in their writing ability and saw no benefit in using Turnitin at this stage of their academic journey. This was illustrated in some of the workshop comments:

> *It's slightly patronising.*

> *It seems strange to introduce this process to students in year three of their degree, when any issues of plagiarism should presumably have been noted and addressed with that particular student.*

> *I don't personally feel it will be of much use at this stage in my degree … I have never been accused of plagiarism up to this point and don't plagiarise!*

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Those who had received a low percentage match on their trial document may have felt there was no need to continue using Turnitin. Conversely, some students may have been deterred from using the software:

> *It is useful to some extend but don't think … I will use it much in my studies as it's got many limitations.*

Since this was the first year that formative access to Turnitin had been encouraged across the institution, it is possible that some students were not aware of the potential benefits offered by the software (Hunter 2012). Given the difference in uptake between modules where Turnitin was embedded and those where it was not, it is evident that tutor support is crucial in encouraging student engagement. As one of our interviewees suggested:

> *But, if only 12% of people are coming [to the workshops], then maybe it needs to be … you know, advertised as it were, in modules and awareness raised that way, and if tutors are telling people how important it is, maybe more of them would come to the workshops.*

A third possible reason for the low numbers accessing Turnitin could be that many students were working very close to the deadline. Our original cut-off date for student formative access was 17 March (five weeks before final submission). However, at the request of project module leaders we extended the opportunity to one week before final submission, as very few students had a draft to upload in mid-March. Two of our interviewees (three of whom did not upload a project draft) confirmed this theory:

> *I think it was just the timescale because I was so busy doing my assignments and trying to get my report done that I didn't really acknowledge that … the time limit … you know, it kind of fizzled … it had gone … and I didn't really know the deadline, kind of thing. I didn't note it down so … I was like, oh, I'll leave it now because the deadline's nearly coming*

> *I couldn't be bothered to look for [the Turnitin link] to be honest, I was so focussed on getting my studying done and I was working two jobs as well. So I really didn't have the time to focus on it I just wanted to get the essay done*

We also wondered if technical issues may have discouraged students from using Turnitin. At the time, our university did not have a VLE integration for formative access, so we had to help students set up their own Turnitin accounts. Despite some initial glitches, 96% of workshop respondents said it was easy (23) or very easy (21) to log into Turnitin and upload their work. Only two students found it difficult. However, some problems occurred when students were accessing Turnitin on their own, after the workshops and off-campus. Several attempted login via the US site Turnitin.com instead of the link to TurnitinUK provided in our VLE. Two interviewees had problems opening the Originality Report off campus, possibly due to home computer security settings. A third (who handed in her final project days before the deadline) said, "I went to [use Turnitin] but then I got a little bit confused with it … my mate struggled with it as well … we just couldn't get it."

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Were students using Turnitin to 'beat the system'?

One commonly voiced argument against allowing students access to Turnitin is that it will help them 'become better cheats' by working out ways to trick the software, by identifying 'safe' sources, or by 'tweaking' copied material, making minor changes to wording, until it is no longer identified as matched text (Warn, 2006). We have found no published evidence to support this view, and several studies which challenge it (Hunter, 2012; Stappenbelt and Rowles, 2009; Wright, Owens and Donald, 2008). A small number of workshop comments gave cause for concern:

> *It applies more pressure on the student, having to make sure their work is suitable … However it does provide a safety factor, as now students can upload work before handing it in, just to find out if they have cheated.*

One workshop participant enquired, 'can it identify the materials translated from other language?' In another workshop, a quadrilingual student plagiarised from websites in four languages, running the non-English sources through Google Translate. Turnitin picked up the English language sources but not the others.

Participants were aware of the potential for identifying 'safely' plagiarisable material:

> *I find it very useful as I can now look out for plagiarism with it, also it will show what sources will not get tracked for plagiarism.*

> *I think that if used for the right reasons (confirming that you have referenced correctly) rather than using it to checking to see if you will be caught, then it is very helpful.*

However our interviewees considered this a low risk:

> *Plagiarism is something you do when you don't have time. I don't think they would actually bother with doing this.*

Owing to our study design, we cannot ascertain the extent to which students were revising their work on the basis of previous uploads. In addition to the evidence that some were submitting work from other modules or by other people, we can see from the upload titles that students were checking discrete sections of their project, e.g. 'chapter 2', 'Appendix.' Because students were not screening revised drafts of the same document, we did not attempt to analyse percentage changes in matched text. However, our interviewees thought there was little danger of students repeatedly 'tweaking' their work:

> *I think that would be too much effort than actually writing an essay yourself …*
> *If they put it through and they had to reword the whole thing they might as well just … write it theirself … it would be too much effort*[7]

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[7] In fact a surprising number of students struggled with the 'let's plagiarise' workshop activity, complaining that "This is hard!" "Does it have to make sense?" "I've got a bad cold; I'm too ill to plagiarise!"

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They also felt that the small risk of misuse should not prevent the University from making the software available to students:

> *If you want to cheat, you can always find your way to cheat; even though you have Turnitin you can't stop it from happening.*

> *There's nothing that's fool proof to be honest; there's going to be people that can find their way round it, the technical geeks. Bully for them. There's gonna be a way round everything, but I think [Turnitin is] really good for making you aware.*

Why were so many students worried about unintentional plagiarism?

We were rather surprised at the number of survey responses (26) related to inadvertent plagiarism. With a longstanding commitment to widening participation in Higher Education, the University of Wolverhampton provides a broad range of curricular and extra-curricular academic skills tuition. Surely, we thought, by their final semester students should be confident about their use of sources in academic writing? Not wholly:

> *Using turnitin will be a helpful tool to ensure that there is no unintentional plagiarism, possibly highlighting weaknesses in either your paraphrasing or referencing.*

> *What happens if by some strange coincidence a student's work happens to have a high matched text score and it was completely accidental?*

> *International students who might not be familiar with Harvard style referencing might be accused of plagiarism by mistake.*

> *It's a good way of making sure you haven't overused sources or quotes so that the majority of the project is your own idea. You may lose focus and think that the ideas of somebody else are superior to your own.*

There may be a degree of self-selection involved: i.e. those who attended the workshops were worried about inadvertent plagiarism, while others were not. This is not to say that the workshop attendees' fears were justified. One interviewee (who achieved an A grade on her project and a first class degree overall) told us:

> *When the Turnitin original email came round, about how everything was going to be run through Turnitin, I immediately panicked that I was going to accidentally plagiarise my entire dissertation, because [laughter] that's the kind of thing that I think.*

Reflecting on the difficulties of paraphrasing, she said:

> *By the time I handed my dissertation in it was on about version nine … by the time you've rewritten [it] maybe nine times, and you've paraphrased it a few times, and switched it around, you might accidentally go back to the original*

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> *wording … there have been quite a few times where I've been writing and I've thought, 'Ooh, a much better way of saying this would be (whatever)', and then I do some more reading and think, 'hang on, this all looks terribly familiar'.*

Another interviewee (who also attained a first class degree and the highest possible project grade) explained:

> *The way it's written is the best way to actually say it so you can't say it the way it isn't in the book. But it's not like you want to plagiarise, it's like there is no other way to make the meaning clear… Sometimes I really don't know how else I should say things, it's like I read something that I realise is something I've been thinking of but the person's already written it.*

The fact that both these students were high achievers suggests that managing intertextuality is challenging not only for novice writers but also for those with more experience.

One interviewee suggested that students might over-use source material in an attempt to placate their assessors (Harwood and Petric, 2012; Neville, 2009; Ellery, 2008):

> *Often the lecturers will say, 'Don't always use quotes: try and paraphrase somebody else's work and put it in your own words, but make sure you put in a reference' … and then I do think that some people take that to the extreme, wanting to please lecturers, and maybe their writing's not that strong and it does read like they've just took big chunks out. … They say 'Oh, I've used so many books and I've used this many journals and I've got one quote from each so I've got thirty-odd quotes,' and I'm thinking, 'Oh god!' [laughter]*

Interviewees also commented on the need to incorporate guidance on source use at each stage of their degree:

> *The first year I did that … Study Skills and we went through, you know, different scenarios of how to rewrite other people's work and referencing and stuff, but I think by the time you get to, you know, as you're going along to your second and third [year], … sometimes you might forget I think.*

This is borne out in a (2008) study by Zimitat, who found that fewer than half of the students in each year group (including final year undergraduates) reported confidence in academic writing skills. Institutions need to be aware that an all-or-nothing 'avoiding plagiarism' tutorial delivered during induction is not sufficient, and that ongoing tuition (including formative feedback and referral to support services where appropriate) is necessary to help students develop as academic writers (Neville, 2009:26; Macdonald and Carroll, 2006).

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Conclusion

There are several limitations to our study. Our primary aim was to trial a learning intervention; we did not consider seeking ethical clearance for publication at the outset and therefore cannot report the comments from Law and Social Policy students (which are broadly similar to those generated during the workshops). There was necessarily a difference in approach between the embedded/freestanding implementation of Turnitin, though this in itself yields interesting findings. Using the Turnitin overwrite function for Originality Reports meant that we could not (given the large number of students and intermission of the Easter holiday) track each upload by students who submitted multiple drafts. We therefore cannot establish to what extent students were revising early drafts on the basis of their Originality Reports. A better method for researching this question would be to use the 'Revision Assignment' function in Turnitin and set up a finite series of submission opportunities. It is also beyond the scope of this article to explore what impact allowing formative access to Turnitin had on assessment outcomes.

Despite these limitations, our findings were useful in informing university procedures. Firstly, the School concerned implemented a policy whereby all students should have formative access to Turnitin as a learning tool, in the context of a core module, at least once per academic year. Given student comments that the first year of undergraduate study might be too early in some subject areas, it was left to the discretion of course teams to select suitable modules for embedding Turnitin. Secondly, an integration for formative use of Turnitin was created within our bespoke VLE (the Wolverhampton Online Learning Framework, aka WOLF). This was made as simple as possible to encourage staff and student engagement. Rather than allowing multiple overwrites, the default was set to single upload, to discourage excessive use. Thirdly, our workshop structure was taken as the basis for a series of university-wide sessions facilitated by the Learning Centres' Skills team. The impact of these policy initiatives has yet to be evaluated, and the role of Turnitin as a tool in teaching academic writing across the institution is (in May 2014) yet to be determined.

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