Mouse click plagiarism: Can technology help to fight back?

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Abstract

Many students arrive at university accustomed to adopting the internet as their primary source of information, but with no prior experience of referencing. This raises issues of the reliability and validity of digital sources, as well as bringing new opportunities for cheating. The internet has made plagiarism quicker and easier; a student simply needs to click the mouse to copy and paste sections of text. The author is interested in the process of academic writing and how, if the text is constructed by a couple of clicks, learning may be limited.

This small scale study explores students’ perceptions, knowledge and experience of referencing, plagiarism and the text-matching software, Turnitin. Using an online survey and focus groups, the practitioner endeavours to see if technology can be used to deter plagiarism and enhance the student learning experience.

The study concludes that, while students superficially understand plagiarism, they struggle with the importance and conventions of referencing. Students require (and expect) early and appropriate educational support to adopt the cultural norms of higher education and learn the process of reading, analysing, synthesising and acknowledging the work of others. Turnitin has limitations, but it does appear to be effective at deterring plagiarism and has the potential to be a learning tool, if introduced and used appropriately.

Keywords

Plagiarism, Turnitin, academic writing, internet, assessment

Introduction

The act of engaging with, and subsequently acknowledging, the literature is a key element of the higher education learning process. Consequently, any short-cuts in this process diminish the value of the learning and the academic award. Students are required to demonstrate their ability to reference evidence in their assessments, but many arrive at university with no prior experience. The literature suggests that plagiarism is on the increase in HE institutions around the world. Furthermore, it is an issue that impacts on all disciplines within a university’s ‘community of practice’ (Wenger, 2006) and should, therefore be of interest to all who work in HE.

Undoubtedly the availability of digital information via the internet makes it easier to plagiarise. The sharp statement by Vernon, Bigna and Smith (2001:195):

‘Stolen scholarship is nothing new, but it can now take place in five mouse clicks’
helped to develop the nature of this research and refine its focus to plagiarism and the internet. Some 80% of UK universities use Turnitin (Duggan, 2007); computer software designed to deter plagiarism. It works by matching students’ text against billions of pages of internet sites, university electronic databases and previously submitted work. As a learning adviser with a speciality in academic skills, the author was interested in discovering whether or not this technology could be used to deter plagiarism.

The study was undertaken in a new university in the North West of England which offers a range of undergraduate and post-graduate programmes. The institution specialises in teacher training and has an extensive portfolio of health and social care courses including nursing and midwifery, allied health professions and social work.

The aims of the study were threefold:

- To explore students’ knowledge, experience and perceptions of academic referencing, plagiarism and Turnitin
- To improve the author’s understanding of the potential use, benefits and limitations of Turnitin
- To use the findings of this practitioner research to become a more effective teacher, and so enhance the student learning experience.

**Literature review**

The Oxford Dictionary defines plagiarism as

‘to take and use (the thoughts, inventions of another person) as one’s own, and comes from the Latin plagarius; kidnapper, plunderer or literary thief’.

Plagiarism is not a new phenomenon and is probably as old as writing itself. However, Park (2003: 472) highlights the fact that the rhetoric within HE, and indeed the media, is ‘colourful’, with phrases from the literature such as ‘the unoriginal sin’ and ‘intellectual shoplifter’ used to describe the plagiarist. Emerson, Rees and MacKay (2005:13) are clear that:

‘Plagiarism is an issue that goes to the heart of academic integrity.’

It is generally accepted that there has been an increase of rates of plagiarism, with levels of 40–50% commonplace (Perry, 2010; Ellery, 2008a; Park, 2003). However, reporting plagiarism is clearly problematic; it relies either on students self-reporting (and they may not be truthful, or may not know), or on tutors catching plagiarists. It may be, therefore, that recorded levels are the tip of the iceberg. However, simple rates of occurrence do not reveal the nature of the plagiarism; clearly one absent reference is not as serious as buying an essay from the internet. Most academics would agree with Carroll (2007) when she says that, whatever the number, it is a problem worth tackling. Duggan (2007) goes further suggesting that a failure to address the problem of plagiarism may lead to a lack of confidence in UK academic awards.

Rather than deliberate dishonesty, plagiarism is often unintentional and due to misunderstandings by students. From their study, Emerson, Rees and MacKay (2005:12) conclude that unintentional plagiarism may be caused by an:
Clearly this has implications for the teaching of referencing. Perry (2010) and Ellery (2008a) highlight that first-year students are at particular risk of unintentional plagiarism. School history and experience play a significant part in a student’s ability to understand referencing (JISC, 2005). With an active policy of widening participation at UK universities, the academic attainment of students is becoming more diverse. It should not be assumed, therefore, that they have had experience of finding and using sources of evidence, or that they will understand the importance of referencing. The JISC Report (2005) concludes that both intentional and unintentional acts of plagiarism are unacceptable but suggests that the approaches to addressing each should be different.

The literature finds that students (unlike tutors) do not consider plagiarism to be important (Park, 2003; Rennie and Crosby, 2001). Ellery (2008b) asserts that, among her students, the perception is that electronic material is different to print material: the students’ societal norm is to access, download and use material from electronic sources, without due acknowledgement or payment. She concludes that it is the responsibility of institutions to inform students of their ethical and legal obligations.


‘...an unethical student is likely to be an unethical practitioner’.

Payne and Nantz (1994) recommend that universities need to enculturate students in the academic world and this will stand them in good stead in their professional careers. Clearly any university has a responsibility to ensure that all its graduates are fit to practice.

The past decade has seen the rise of the internet and the resultant exponential growth of digital information. Duggan (2007) reports that students increasingly turn to the internet when researching their assessments. This is not surprising; it is easy to access, whenever they chose and wherever they are. A small number of students are even using online essay-banks or paper-mills, where essays can be bought and downloaded (Carroll, 2007).

However, despite their convenience, electronic resources make the conventions of referencing more complicated, and will inevitably result in more instances of plagiarism. More importantly, there is concern about the reliability and validity of digital sources (Duggan, 2007). Vernon, Bigna and Smith (2001:96) expound the value of online information for scholarly activity, but they also recognise that with it comes:

‘...new opportunities for intellectual deceit.’

The internet has certainly made plagiarism quicker and easier; a student simply needs to click the mouse to copy and paste sections of text. Ellery (2008b) worries about how copying and pasting leads to a lack of engagement. She suggests that students often fail to perceive academic writing as a process; rather they see it as a product, i.e. an assessment. However, it is the process of reading, taking notes, paraphrasing, reflecting and being critical that
contributes to the student’s learning and, if the text is constructed by a couple of clicks, learning is limited.

While the internet and digital materials have undoubtedly made it easier to plagiarise, technology may make it easier to detect (Park, 2003; Auer and Krupar, 2001). Payne and Nantz’s study (1994) into the social accounts for plagiarism reveal that a perceived lack of risk of getting caught is significantly linked to the likelihood of cheating. Similarly, Straw (2002, cited in Park, 2003:475) suggests that the ‘generation why-not’ believe it is acceptable to plagiarise from the internet as tutors do not have the technological expertise necessary to find them out.

Turnitin is a software package designed to detect potential plagiarism and so act as a deterrent. JISC (2005) reports that Turnitin is making an impact in deterring deliberate plagiarists, but the evidence is not clear cut. Studies from Cohen (2010) and Emerson, Rees and MacKay (2005) suggest an impressive reduction in rates of plagiarism, but they also report that more students used direct quotations. The authors acknowledge that this may indicate that students are not necessarily learning how to write academically with appropriate referencing.

Apart from detection, there are other benefits of Turnitin: Students at Loughborough University appreciated the flexibility and privacy of online submissions. Tutors valued the security and equity of the system but, perhaps more importantly, students were more likely to refer to their tutor feedback (JISC 2010). Another important aspect of Turnitin is its value as a learning tool. The originality report (OR) can be used as invaluable formative feedback and help prevent unintentional plagiarism (Cohen 2010).

Some studies imply that students did not have access to the originality report prior to grading (JISC, 2010; Emerson, Rees and MacKay, 2005). The OR is not a plagiarism report; it simply indicates where Turnitin has previously seen a grouping of words. This should suggest to the student and tutor that the text is worth reviewing and it requires academic judgement. Emerson, Rees and Mackay (2005) identify that although Turnitin is good at finding significant and intentional plagiarism, simply using the similarity index (or percentage) from the OR can be an unreliable indicator of plagiarism; it can hide problems with referencing (and academic writing) if low percentages are not further investigated. A ‘clean’ report does not guarantee the absence of plagiarism; there may still be copying from a book. The authors conclude that Turnitin is an effective deterrent but that it is a ‘blunt instrument’ (Emerson, Rees and Mackay, 2005). It has limitations and academics need to know how to analyse ORs and use these to further support individual students.

Duggan (2007) compares Turnitin to a speed camera; some students will take notice and not offend, others will try and cheat the system. It is a useful deterrent but it has limitations. The internet is here to stay and, furthermore, all universities are building their collections of e-journals and books. It is essential, therefore, that universities develop a coherent framework to manage the problem, and support staff through the difficult and time-consuming process of pursuing cases of plagiarism (Cohen, 2010).

For many authors, prevention of plagiarism is better than detection (Carroll 2007; JISC, 2005; Park, 2003; Auer and Krupar, 2001) and, they argue, it is important to help all students understand what is required and expected of them when they arrive at university. Cohen (2010), Forrest (2007) and Emerson, Rees and MacKay (2005) all provide intensive
pedagogical scaffolding and conclude that students need to be taught the importance, and process, of academic writing (including referencing), as well as the conventions. To those teachers short of time, Auer and Krupar (2001) recommend using library support staff. Other authors urge institutions to create a culture of honesty and sound academic practice (Duggan, 2007; Payne and Nantz, 1994). Auer and Krupar (2001) consider ways to design out plagiarism from assessments. Forrest (2007) recommends formative assessments to develop referencing skills, and Rennie and Crosby (2001) believe that teachers should shift the emphasis from assessment to the learning process in order to reduce plagiarism. It seems clear that, when it comes to tackling plagiarism, what is required is a holistic and co-ordinated approach. Carroll’s seminal book (2007) outlines the need to address plagiarism through institutional policy, transparent practice and culture, supportive and timely education, appropriate assessment design and, finally, consistent detection and sanction.

Methodology
This study was practitioner research; a form of personal inquiry where the author reflected systematically on her own practice and accounted for her values and behaviour (McNiff, 2007). The purpose was to generate knowledge, but Shaw (2005) argues that information gathering is not enough for teachers; research should be used to promote critical practice. Developing this ‘thinking ability’ (Trowler and Wareham, 2007) enables us to change and improve practice (McLeod, 1999).

The aim of the study was to speak directly to students about their experiences and views and gain a clearer insight into their social reality (Blaxter, Hughes and Tight, 2001). A focus group is a good way to gather a large amount of data quickly (Robson, 2002) and it also presents an opportunity for participants to defend their views to their peers; to contest and collaborate in their meanings (Bloor et al., 2001). Eder and Fingerson (2002) discuss the ethical dimension of research with young people and recommend an emphasis on reciprocity. To this end, time was available at the end of each focus group to answer students’ questions about plagiarism and Turnitin.

The author was reliant on the support of lecturers who acted as ‘gatekeepers’ to enable her to reach students who had previously submitted their assessments via Turnitin. This convenience sampling had its advantages as well as disadvantages; it would have been a very different piece of research if the focus group interviews had been conducted with students previously taught by the author. This may perhaps have given greater insight into how the author could improve her sessions, but the students may not have been so open and honest. Padgett (1998:1245, cited in Shaw, 2005) is critical of this conflict of roles between researcher and practitioner and the potential for a diminution of standards and ethics. The author was not their teacher and this incompatibility was therefore minimised.

The three focus groups took place in March 2011 with between 8–12 students in each. Two of the groups were from the same programme of study (levels 4 and 5) and the third group was at level 4. The students were familiar with each other. Topics to be covered were decided in advance. However, focus groups are interactive and serendipitous, and so this was a signpost for exploration only, and the interviews were semi-structured (Langer, 2001).

The focus group interviews were recorded and listened to several times before the author transcribed detailed notes and ‘extracted significant statements’ (Holloway and Wheeler, 1996). After further reflection of trends, patterns and incidences (Taylor, Wilkie and Baser,
the focus group findings were populated into a single document under key themes. Many of these themes had become apparent early in the research; through reading the literature and planning the design, but it was an emerging process, and sub-themes developed. Eder and Fingerson (2002) recommend that participants’ voices are expressed accurately in the presentation of research, and this is attempted in the findings section of this paper.

The Bristol online survey (http://www.survey.bris.ac.uk) was also used in order to reach a wider number of students and triangulate findings from different methods. Bell (2005) recommends triangulation to cross-check the existence of phenomena and veracity of accounts. Johnson and Onwuegbuzie (2004) describe ‘mixed method’ research as more inclusive and balanced. As well as investigating students’ norms and behaviour, the author wanted to test their knowledge so she adapted a poll originally created by Leeds University. It was important that the survey was short and easy to complete to encourage participation; questions were limited to just six, together with the plagiarism knowledge test. Again, lecturers were used as gatekeepers to help the author reach students. A total of 133 students participated, and the survey was completed by all levels; from foundation students to postgraduates. One third of participants were first-year students.

To ensure the validity of the survey, it was piloted with colleagues and amended accordingly. Standardised responses were pre-coded for the six questions with an open, optional response at the end of the survey. Bristol online survey allows the researcher to cross-reference variables, and this was used to give an indication of any possible association between level of study and behaviour/knowledge. Clearly the sample size prevents generalisability (Robson, 2002).

Discussion of findings

Knowledge of referencing/plagiarism

Two of the three focus groups expressed a strong concern about the limited teaching they had received on how to reference and avoid plagiarism, and all three groups still found referencing difficult, particularly online sources. Many students felt that they had been left to find out about referencing for themselves; one student commented on her lesson:

\textit{I thought it was awful quick. Do you know what you’re doing? Right, off you go.}

This view was reiterated by students in the survey:

\textit{I feel not enough information is given when starting a course, giving students a leaflet to read about refs and plagiarism doesn’t really help, should be given more in-depth info.}

Carroll (2007) is clear about the need to provide early support with referencing particularly for those who have no prior experience. She also recommends signposting students to sites for further guidance. Members of one group were unaware of \textit{Cite them right}, (Pears and Shields, (2010) the guide to referencing. Many of the students found their own solution through the apparently user-friendly referencing software on Windows 7. While unexpected, this is, perhaps, technology helping to prevent plagiarism.

The focus group participants were able to provide a reasonable definition and examples of plagiarism. Similarly, 100% of survey respondents claimed to understand what was meant
by the word ‘plagiarism’. However, on closer inspection, this was not so clear cut. Respondents were asked to read seven statements and identify which were acts of plagiarism. This exercise was problematic for students; no statement was identified with 100% accuracy and only 43% correctly found statement 4 to be plagiarism. Discussions with focus group participants confirmed that they too have considerable difficulty in paraphrasing which can lead to plagiarism. One appeared to sum up the views of the group when she said:

*There are only so many ways you can paraphrase something.*

This suggests that many students are not confident enough to use their own words, or that they may be trying to re-state the literature rather than attempting to critique it. Indeed, the discussions revealed little understanding of the process of creating a synthesis or generating new knowledge.

The survey found that students use the internet extensively for their assessments, with only 3% not using it. This was corroborated by the focus groups who confirmed that it was easier and more convenient to access than other sources. Ellery (2008b) worries about how copying and pasting from the internet leads to a lack of effective engagement with academic literature and can, therefore, have a consequential detrimental impact on student learning. This appears to be substantiated in this study – for students in the focus groups, copying and pasting from the internet is the norm and, for some, the process of how the text is then paraphrased is precarious:

*That’s way further down the line!*  
as is how the text is acknowledged in the assessment:

*I tend to forget where I got it from and when I go back [to the internet] it’s not there.*

For all academics endeavouring to encourage a deeper approach to learning, this is of concern.

**Acceptable plagiarism**

The students had a vague idea of the university’s policy on plagiarism and were aware that they could be removed from their course, but none knew how to access the policy.

While nearly 11% of survey respondents self-reported that they had knowingly (but infrequently) plagiarised, over 17% were unsure if they had ever plagiarised. This, perhaps, demonstrates the degree of ambiguity and confusion over plagiarism. Within the focus groups, students initially agreed that no forms of plagiarism were acceptable. However, one participant voiced the views of others:

*I think they’re inevitable but I don’t think they’re acceptable.*

This, she explained, was because of the problems of paraphrasing and having a:

*...limited number of ways to say something.*

Unintentional plagiarism was, therefore, not considered so serious and, students felt, should be treated more leniently. When asked if students should take responsibility for learning how to reference accurately, they were united in saying that the tutor should take a greater responsibility, pointing out that they are paying to be taught. This has resonance with Auer
and Krupar (2001) who identify the ‘consumer mentality’ of students. This expectation and sense of entitlement will surely heighten with the looming increase in student fees.

Intentional plagiarism was perceived by students as being in a different league:

*I would say plagiarism is when you get somebody else to write it purposefully... you purposefully copy because either you’ve not understood or you really just couldn’t care a less. You don’t want to do the work and you purposefully copy the whole paragraph or whatever out of the book and don’t reference it appropriately.*

When asked about others committing acts of plagiarism, the groups were primarily concerned with it detracting from their own hard work. They ‘deserve’ their degree and, understandably, felt it was unfair for someone else to be rewarded with a certificate for ‘cheating’. However, none of the participants voiced concerns about ‘an unethical student’ becoming ‘an unethical practitioner’ (Larkham and Manns, 2002, cited in Sutherland-Smith, 2008:22). Neither did they express concerns over safety in the workplace. Academic misconduct is contrary to the principles of both academic and professional integrity. Since the majority of students from this university will go on to work in schools or health and social care settings, it is essential that the institution ensures that students are fit to practice.

**Turnitin**

Nearly 46% of survey participants are required to submit some or all of their assessments via Turnitin. From 1 March 2010 to 28 February 2011, electronic submissions at the university increased by 266% from the previous year, and this trend seems set to continue (White, 2011). Clearly, the university is committed to promoting the use of Turnitin, but discussions within the focus groups suggest that little teaching precedes use. This study contrasts with Cohen (2010) where 94% of her students felt that they had received enough information about Turnitin before being asked to use it. Some focus group participants had tried to find information about Turnitin on Blackboard but felt that it had not helped. Several had experienced problems with the test area. However, the Turnitin section on Blackboard is clearly well used, with over 18,000 hits between September 2010 and March 2011.

Only two of the 30 students interviewed had previously used the package and, with no or limited training, this had led to a lack of understanding of what Turnitin actually is. Turnitin is seen as a ‘plagiarism detector’, ‘policing’ students’ work and ‘catching them out’. Students did not appear to have realised that Turnitin is simply a text-matching package that can highlight potential plagiarism. This misunderstanding had led to high levels of anxiety among many of the students. There was a fear of being wrongfully accused of plagiarism, and a worry about their technical inability to submit, as well as a concern that the internet connection would be down. One student talked of feeling ‘panic-stricken’ about submitting her work.

Most of the students also had limited understanding of what a Turnitin originality report (OR) was or how to read it. All the groups asked the author what percentage figure was acceptable in the similarity index; one student did not know whether a high percentage was good or bad. A significant number of students admitted that they do not look at their OR, and more than one student asked how to find it.
To be honest, when I got mine back, I didn’t look at it ’cos I didn’t know what I was looking at.

A few students expressed high expectations of Turnitin and have erroneously conferred powers on it:

I automatically thought...all my referencing is fine. I got it down to 6% – that’s fine. I thought I’d got referencing down to a tee and then when somebody actually marked it and said I’d done it all wrong... So it doesn’t tell you... because I’d paraphrased it all. It didn’t tell me that I had to reference so when I thought it was totally fine and when I got it back marked, it wasn’t. I felt like it had let me down. I was disappointed with it.

As Emerson, Rees and MacKay (2005) point out, identifying plagiarism through a percentage alone is flawed. Simply using this approach may allow unacceptable plagiarism to go unheeded. They recommend that if Turnitin is used, universities should train both staff and students. The OR can be used as a learning tool to help students identify and rectify unintentional plagiarism. Only three students were explicit in saying how they had analysed their OR and amended their essay; two of these had previous experience of Turnitin. However, Cohen’s study (2010) suggests that reviewing their ORs may help students to ’beat the system’. One student did admit that, on seeing her OR, she had simply swapped some words around to get a lower percentage, even though she recognised that it did not read so well.

Despite many concerns, the students did recognise some of the benefits of Turnitin; flexibility of submission and greater security and privacy. They were also unanimous that Turnitin reduces plagiarism but had some concern that those students who were not submitting their assessments electronically could be ‘getting through the net’. The survey revealed that, while 5% of students who use Turnitin, and 4% of those who sometimes use Turnitin, admitted to infrequent plagiarism, 15% of students who do not use Turnitin said that they had plagiarised. While this reinforces Payne and Nantz’s study (1994), which found that a perceived lack of risk of getting caught is significantly linked to the likelihood of cheating, it should be remembered that the sample size was small (133 students).

Conclusion

As a teacher, the author wanted to explore an area of her practice with the aim of enhancing the student learning experience. She attempted, therefore, to gain a greater understanding of students’ knowledge, experience and perceptions of academic referencing, plagiarism and Turnitin. The study considered how mouse click plagiarism may inhibit the learning that emanates from the process of academic writing, and it questioned whether Turnitin could be effective in deterring students from plagiarising in their assessments.

The study found that most students come to university accustomed to adopting the internet as their primary source of information, with no prior experience of a formal system of referencing. Students often find both the conventions and reasons for referencing difficult and confusing. Furthermore, there are significant grey areas in their understanding of plagiarism, notably paraphrasing. Clearly students require early and appropriate educational support to adopt the cultural norms of HE and learn the process of reading, analysing,
synthesising and acknowledging the work of others. This study has also highlighted the need to revisit referencing at level 5, and focus on paraphrasing and adopting a critical approach to writing.

Expecting students to use Turnitin without teaching them how to, can lead to fear and misunderstanding. Many students have an ambiguous relationship with Turnitin, believing that it will prevent plagiarism but also fearing that it will accuse them of unintentional plagiarism. Turnitin has limitations but it does appear to be effective at deterring plagiarism and has the potential to be a learning tool, if used correctly and seen as part of a comprehensive framework. This study has also reinforced the need to improve e-resources available on Blackboard and create a more inclusive and flexible learning environment with appropriate information on how to use Turnitin and interpret the originality report effectively.

References

All websites accessed 2 November 2012


