AN EXAMINATION OF STUDENT ATTITUDES TO PLAGIARISM-DETECTION SOFTWARE: A PILOT STUDY AMONG JAPANESE ENGLISH MAJORS

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Abstract

This project investigated the use of plagiarism-detection software on an undergraduate L2 academic writing course. Plagiarism-detection software was incorporated into the course as an aid to paraphrasing. A case study approach was adopted to determine students' impressions of using the software both before and after the course. Journal entries and group interviews were used to collect the data. Emergent themes from the data were also examined in conjunction with samples of students' written work. The results indicate an almost unanimously favourable reaction to the software as a learning aid.

Key words: *plagiarism-detection software, formative feedback, ESL, student perceptions*

1. INTRODUCTION

There is little doubt that instances of plagiarism have become more prevalent in the digital age (Badge, Cann & Scott 2007; Batane, 2010). Whilst many universities and higher education institutions adopt strict plagiarism policies or honour codes the prevalence seems to continue unabated. Bennet (2005) found that 46% of UK undergraduates had plagiarised at least once, while the results for Selwyn (2008) remarkably showed that around 60% of students had engaged in some form of moderate internet based plagiarism. The problem of plagiarism seems compounded when considering the many different reasons given for engaging in it (Park, 2003; Bennet, 2005). This leads practitioners and educators to often fumble for effective solutions to limit its prevalence.

2. CONTEXT

The study took place at a Japanese university specialising in foreign language education. The participants were all upper intermediate to advanced (5.5 – 6.5 on the IELTS band score) English language majors. All participants were in their sophomore year, aged between 19 and 20, and among the goals of the academic literacies course was the writing of a research paper which conforms to written academic conventions so that the students may engage in evidence based enquiry. The students had previously experienced essay writing at university level but the task was still relatively unfamiliar considering the incorporation of secondary sources of information and their lack of previous academic writing experience in compulsory education. In previous years the researcher had noted the difficulty other classes had with paraphrasing sources of information.

3. LITERATURE REVIEW

A plethora of literature exists examining the issue of plagiarism. The *Collins Concise Dictionary of English*, Makins (1982) defines plagiarism as the act of attributing the work of an author as one's own, from Latin plagiarus (plunderer) and plagium (kidnapping). Indeed, not only the above definitions but also the very discourse surrounding plagiarism itself can be described as one of crime and punishment (Gullifer & Tyson, 2010). Current ideas of plagiarism are often based on a Western capitalist view of the ownership of intellectual property (Duff, Rogers & Harris, 2006; Calvert Evering & Moorman, 2012). While the former authors agree with this sentiment the latter authors argue for a reinterpretation of the ownership of ideas in the digital age. Park (2003) examines the many different forms of plagiarism from using sections or whole written texts from an author and using it as one's own work or buying an online essay to submit for class, to using information from an external source and

acknowledging it in the reference list but failing to include necessary quotes. Park (2003) makes an important distinction between the different types of plagiarism; the former two examples are classed as intentional plagiarism whereas the latter is termed unintentional plagiarism.

A great deal of the literature focuses on the reasons students plagiarise (Newstead, Franklyn-Stokes & Armstead, 1996; Park, 2003; Bennet, 2005; Roig & Caso, 2005). These reasons can range from a perceived lack of time, a lack of motivation to study, a lack of motivation with the course, external pressure to succeed, to individual factors such as age or gender. Focusing on behavioural or individual factors may prove problematic as such a focus may recommend simply changing the behavioural trait causing plagiarism, such as poor time management, without looking at the social, cultural or environmental factors which may have influenced the original behaviour (Gullifer & Tyson, 2010). Studies have examined the extent to which cultural context can be attributed as a cause (Evans & Youmans, 2000; Duff, Rogers & Harris, 2006; Stappenbelt, 2012). Yet these results have been mixed, Duff, Rogers & Harris, (2006) reported the need for international students to understand the importance of the western academic context of scholarship and Strappenbelt (2012) noted that international students were less aware of the impact of plagiarism. However, Evans & Youmans (2000) found that different nationalities all had similar ideas of what constituted plagiarism and yet they were also similarly confused. The latter authors found that the group conversations undertaken in their study actually helped students co-construct their perceptions of plagiarism indicating a previous lack of understanding.

Indeed, there have been several studies on students' perceptions of plagiarism and from the various different types of plagiarism to the way it is interpreted, it can come as no surprise that students have enormous difficulty in identifying exactly what plagiarism is (Duff, Rogers & Harris, 2006; Jackson, 2006; Walker, 2008; Gullifer & Tyson, 2010). While this is true of many students, it is especially true of those writing in English for whom English is not there first language (Evans & Youmans, 2000; Stappenbelt, 2012). Such is the confusion over what constitutes plagiarism, that the findings of studies that use self reporting as the main data collection method can be cast into doubt as students may be unknowingly plagiarising more or less than originally reported (Power, 2009).

Some studies have examined the use of plagiarism-detection software and in particular as to whether they reduce the instances of plagiarism (McKeever 2006; Batane 2010; Youmans 2011; Rolfe, 2011; Buckley & Cowap, 2013). Every study bar Youmans (2011) found the introduction of plagiarism-detection software led to a decrease in the instances of plagiarism. In addition Batane (2010), Rolfe (2011) and Buckley & Cowap (2013) all emphasised the positive effects of using plagiarism-detection software when used formatively to give feedback on multiple drafts of writing. One possible reason for Youmans (2011) finding no reduction in the instances of plagiarism is that the feedback was not visible to the participants and as a result, they could not benefit from the formative feedback. The students may have also suffered from the same confusion as to the nature of plagiarism documented in other studies.

4. RATIONALE

Given the previously stated confusion over what constitutes plagiarism, especially among ESL students with regard to paraphrasing, and given the previously reported beneficial effects of utilising plagiarism-detection software in formative feedback, it seems logical to investigate the use of plagiarism-detection software in the ESL context. Considering the discourse of intellectual crime surrounding plagiarism (Gullifer & Tyson, 2010) it is worth investigating how ESL students perceive the use of plagiarism detection software on a writing course and if they experience any anxiety that the authors mentioned. If there are indeed benefits of using this software for formative feedback it also seems prudent to examine whether ESL students similarly benefit. In addition, an examination of writing samples for any instances of plagiarism and any subsequent reduction in these instances would also seem worthwhile. This aspect of the study will mainly focus on the reduction of unintentional plagiarism or the misappropriation of information to the original author through a lack of knowledge or familiarity with academic referencing conventions (Park, 2003).

5. THE STUDY

To examine student perceptions of the formative feedback of plagiarism-detection software a case study approach was adopted for the study. In addition a pilot study necessitates a small group of students being examined and as such one class was chosen (n=17). Student perceptions were examined over the course of a semester. After a lesson on identifying the different types of unintentional plagiarism, students were introduced to the plagiarism-detection software (Turnitin) as a tool to assist paraphrasing. A subsequent paraphrasing activity was used to allow students to become accustomed to the specifics of using the software. Their initial impressions were recorded in their learning journals. The students were asked a simple open ended question as this allows for conflicting accounts or both positive and negative impressions (Brannen, n.d; Hammersley et al. 2001). Participants were asked the following question:

What was your initial impression of using Turnitin?

After using Turnitin to submit multiple drafts of two assignments, the students' perceptions were then examined post-course through a similar open-ended question:

How do you feel about using Turnitin now that you have completed the course?

The impressions were then examined for themes and these were further explored in follow up semi-structured group interviews. The interviews followed the pattern of introductory question to transition question and subsequently the key question to fully examine emergent themes (Kruegar, 1994; Morgan 1997; Hammersley et al. 2001). The writing tasks undertaken on the course were examined retroactively for instances of plagiarism and whether the frequency of instances of plagiarism decreased. The students were all assigned an alias for the study to protect their anonymity.

6. DATA ANALYSIS

The data collected from the initial impressions and post-course impressions was first read and re-read, before being coded into categories and then analysed for patterns or commonalities as per the methods of qualitative analysis according to (Kruegar, 1994; Morgan 1997). As one might expect, students had either a positive or mainly positive impression of the software or a negative or mainly negative impression. These impressions were then analysed for common reasons which were subsequently explored in interviews. Students' written assignments that had been uploaded to turnitin were also analysed for instances of plagiarism using the software's similarity index, which displays a percentage that matches online sources. Similarities in the bibliography were not counted and neither were direct quotes (students were given a limit of two quotes per essay of no more than two sentences in length). The instances of plagiarism were then coded into categories and the frequency of these instances was then analysed.

7. RESULTS

7.1 Initial Impressions

The initial data collection revealed that more than half of the class were mainly negative or wholly negative towards using the software for the first time. All students that were wholly negative stated that they did not understand the purpose of the software.

"I didn't know why I need to use Turnitin to submit assignments. I thought it is good enough to hand it in by hand not electronically." (Mamiko)

"My first reaction for this is not good, because I was not able to understand what it teaches and shows." (Natsuko)

"I did not know the benefit to use this website." (Shunsuke)

Despite identifying the different forms of plagiarism and the software being introduced as a tool to aid paraphrasing and students engaging in a practice activity to familiarise them with the usage of the software, the students who felt the strongest negative feelings did so because they saw no benefit in using it or saw no reason to use it. Of those that were somewhat negative the reasons for the negative feelings stemmed from the initial difficulties with using it.

"It took me a little bit time to submit. I don't know how to use this so it is difficult to use this. I would prefer to submit to the teacher more than network because I think it is easier way and teacher is more reliable than network." (Saki)

"When I used Turnitin first time, it was a little bit troublesome for me. That is because I didn't know how to submit my texts and had my texts in neither Dropbox nor Google Drive. So I couldn't submit my assignment smoothly." (Maya)

Some of the initial problems using the software were due to the compatibility issues between the students' tablets and Turnitin which was compatible with most common software packages but not necessarily tablets. This is no longer the case as there is, naturally due to the prevalence of tablet technology, a Turnitin application.

Despite many of the students' negative initial impressions some students did display positive feelings towards the new software and those who initially felt positive about it were surprised at how effective it was in matching texts to online materials and how the software actually shows the reader which sections and the exact words that match the original online materials.

"When I used the Turnitin for the first time, I was so surprised that it told us the similarities between an original text and what I wrote." (Nana)

"It was my first time to use this kind of program to find out that my paraphrasing is good or not so I was excited to use it. I thought it will only score my paraphrasing but it also points out what I had on my paraphrase that might look like a copy when comparing with the one that I sited in my paper." (Momoko)

It could be inferred then, that these students used the information given to them by the software to re-draft their writing and as such saw a practical application for its use.

7.2 Post-course Impressions

In contrast to the initial impressions, almost all students at the end of the course felt positive or mainly positive about using the software. By this point students had submitted assignments, including re-draft assignments, four times in total. The reasons for the positive feelings were two-fold. The first was the opportunity to receive feedback on paraphrasing in the form of a similarity match and subsequently re-draft and resubmit the assignment until the deadline as many times as was necessary.

"Using Turnitin was useful as to know plagiarism. Even I tried to paraphrase sentences, the order of words have not changed but vocabularies have changed. I did not know that was one of the plagiarisms......" (Ayano)

"I changed my feeling of Turnitin. First, I didn't have a good image but I found Turnitin is not difficult to use and I can check how much I have used the same sentences or phrases in the document. Therefore, I can correct it." (Yui)

"...after getting used to it, it was good tool to check if I wrote my essay correctly. It will highlight the part which I didn't paraphrase correctly so I can rewrite my essay. Turnitin will check my assignments faster than teachers so I can rewrite it before I forget and while I have a lot of information in my mind." (Saki)

"Where I made mistakes was colored and percentages that how much I constituted plagiarism were showed, so it was easy to review how I should have cited professionals' ideas as I used Turnitin." (Miho)

Clearly the participants in the study felt that the receiving feedback on their paraphrasing, which may take as little as thirty minutes to receive, was a valuable tool in the writing process. Feedback could be incorporated into the re-draft while the task was still fresh in the students' minds rather than waiting for feedback from the teacher which could take several days. The clarity of the visual nature of the highlighted sections of text in the software's similarity index was also deemed helpful to pinpoint areas that require re-drafting and clarifying what constitutes plagiarism. The latter of course having been previously identified as an area of particular concern.

In addition, the second reason for the students' positive perception was that they appreciated the ability to submit assignments remotely rather than in person by hand. Again, this is in contrast to their first impressions which displayed dissatisfaction with the software's ease of use.

"In my opinion, "Turnitin" was useful and convenient for me. The reason is that assignment can be submitted right after completing the task. I tend to worry about whether I can submit the task even after finishing until I bring it and turn in to the teacher. However, this "Turnitin" can get rid of my tendency. I hope its usefulness will be known to a lot of students. (Kyousuke)

"Also, I can hand in my assignment if I am absent from school so Turnitin is useful and it has some good points. (Yui)

Some students mentioned the feedback received on paraphrased sections of text as useful as well as the software's applications that make it similar to an electronic drop box. Of the students that did not mention the feedback on paraphrasing as useful it is also important to note that in none of their drafts were there any examples of highlighted text in the similarity index. This may be because they were already proficient enough not to require feedback on their paraphrasing.

Perhaps the most important question, then, is why the students appreciated the feedback on their paraphrasing. This particular question was examined in the interviews and the students' appreciation of the feedback stemmed from their continuing confusion over what constitutes plagiarism.

"Since I was a freshman I worried about plagiarism when I write something. I don't understand how to cite something and sometimes I write a sentence which is written in the same way on a website" Natsuko

"We don't know how to paraphrase, we don't know what we should copy and what we shouldn't." (Nana)

"It takes time to go to the writing centre and check our paraphrasing, Turnitin is quicker and more useful because it tells us what is plagiarized." (Nana)

Here the students indicate some of the anxiety that they have with paraphrasing, earlier alluded to by Gullifer & Tyson (2010). Despite making attempts to paraphrase and change the words while keeping the same meaning students may subconsciously plagiarise, possibly by copying language patterns. Youmans (2011) found that one reason for unintentional plagiarism stemmed from students fixating on language from academic texts and this language would then subconsciously overlap in their written assignments. One of the benefits of the software is that it can highlight unintentional or subconscious plagiarism for subsequent revision promptly, allowing students to re-draft much more efficiently.

A further problem highlighted in the interviews relates to the fundamental nature of learning a language, namely that learners will copy speech or language patterns. It must be quite infuriating for a learner to be rewarded or praised for what was previously good language learning practice and to now be told those habits are undesirable. This of course may be one of the reasons that plagiarism becomes such an issue for ESL learners (Evans & Youmans, 2000; Stappenbelt, 2012) and in particular with regard to paraphrasing (Maas, 2002; Jackson, 2006; Walker, 2008). The ability to then check one's paraphrasing remotely and promptly would appear to be of particular benefit to ESL learners.

7.3 Reduction in Plagiarism Instances

While the students that had difficulty with paraphrasing were unanimously in favour of using the software, the question remains as to whether it had any effect on the frequency of plagiarism instances

in the students' writing. The initial student assignment, a written research proposal, showed matches to online sources in six of the seventeen submitted assignments. The similarities ranged from 2% to 16% with the majority showing more than a 10% match. In all cases the type of plagiarism found was copying sections of text and including a citation. The text was either directly copied or an attempt at paraphrasing had been made but the attempt had been insufficient, perhaps by changing a small number of words. It is important to note that this would clearly be classed as unintentional plagiarism (Park, 2003) as the original author was acknowledged in each case.

For the second written assignment, the first draft of an independent research essay, the similarity index showed matches in eight papers. The similarities on this occasion ranged between 1% and 7% with the majority of papers showing a less than 3% match. It is also important to note that the specifics of the assignment are different with the research paper requiring cited sources, while the same was not true of the research proposal. Whilst there may have been marginally more instances of plagiarism the amount that had been plagiarized had decreased. The instances of plagiarism on this occasion were insufficient paraphrasing and some unattributed information. The second draft of this assignment produced only a very slight reduction in the amount of plagiarism, a 1% change in some pieces of writing, however by the third draft only three written assignments contained sections which could be described as plagiarism as the paraphrasing was still slightly insufficient or the unattributed information was still present. It may be the case that the unattributed information, as it was less than a sentence, may have been deemed a language pattern and thus freely available to use or a coincidental match. Nevertheless, it would appear the instances and percentages of plagiarism decreased over the course of the study.

8. DISCUSSION

From the initial negative perceptions to the far more positive post course impressions, it seems the participants appreciated using the software as either a formative paraphrasing feedback tool or as a drop box. It should also be noted that the participants that were found to have instances of unintentional plagiarism in all of their writing assignments, namely Yui and Natsuko, were some of the software's biggest advocates for its formative paraphrasing feedback. This indicates that those having the most difficulty with paraphrasing were aware they were having difficulty and found it the most useful in terms of formative feedback and, according to the comments regarding uncertainty over what constitutes plagiarism, in alleviating the well documented confusion over plagiarism. Some of the comments also shed some light on where this confusion stems from for ESL learners, in particular regarding comments relating to subconsciously copying the language use of others.

9. LIMITATIONS

As the study was small in scale the findings cannot be deemed applicable to every context. However, a pilot study and one which requires the purchasing of software for a trial period would necessarily be small scale and the almost unanimous approval of the software, especially considering the early negative impressions, should not be discounted. While the impressions of the students having difficulty with paraphrasing were the most positive, it is unclear whether those that did not mention the benefit of formative feedback on their paraphrasing were having difficulty or whether they used the formative feedback and just did not mention it. As the software does not have the capability to track changes made to multiple submissions it was not possible to analyse whether students submitted multiple drafts before the submission deadline and incorporated the feedback received.

Perhaps the most notable limitation is the ethical consideration of student copyright (Forster, 2002; McKeever, 2006). Students may object to their work being uploaded to a database and a digital print of their work remaining. Naturally, the use of plagiarism-detection software will need to be carefully managed and introduced (McKeever, 2006). Student consent forms and the fact that students themselves submit assignments to Turnitin may alleviate ethical concerns.

The software itself is naturally limited in terms of the scope within which it can match submissions to online sources. Many peer-reviewed journals are protected by passwords and as such the material will not be visible to Turnitin. That being said, should a piece of work from a password protected journal have been plagiarized by another student then a match may occur if a further student plagiarises it and both submit their work to Turnitin.

10. CONCLUSION

Due to the confusion over what constitutes plagiarism, already noted in this study and alluded to by the participants, effective plagiarism education and training is important (Landau, Druen & Arcuri, 2002; Duff, Rogers & Harris, 2006; Badge, Cann & Scott 2007) and in particular education which creates greater interaction among students and among students and instructors (Evans & Youmans, 2000). The participants in this study were overwhelmingly in favour of using Turnitin as part of their plagiarism education. Although the software will not provide an instant cure for plagiarism (Youmans, 2011), the benefits of the formative feedback on paraphrasing given to students are also well documented (Rolfe, 2011; Buckely & Cowap, 2013). In particular this feedback may benefit students in terms of limiting unconscious plagiarism due to student fixation on language patterns in academic texts as found by Youmans (2011). Howard (1999) states that insufficient paraphrasing such as that most commonly found among the participants in this study is neither plagiarism nor cheating, just the work of unpolished learners attempting to gain access to the university community. This study contends that the formative use of plagiarism-detection software is a valuable educational tool to facilitate student access to the university community.

DISCLAIMER

This article does not seek to endorse the use of Turnitin over other forms of plagiarism-detection software. The article instead reports merely on student perceptions and experiences of using it.

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