

Multiple uses of anti-plagiarism software

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While debate has been raging about intellectual property rights and presumption of guilt when using anti-plagiarism software in academia, less attention has been focused on its pedagogical benefits. These benefits will be illustrated in this paper based on the use of *Turnitin*, for pedagogical purposes in an English-medium context in Japan. The purpose of using the software was to teach students about the issue of plagiarism and ways to detect and avoid it in their own writing. This was done to prepare the students to move into an English-medium programme and/or study abroad in English-language contexts. Thus, the use of this tool combined a very practical goal with a strong focus on learner autonomy rather than assessment. The paper will provide an overview of the different steps teachers, students and tutors took to maximize use of the various functions available in the software to analyse writing, provide feedback, and improve writing. Based on a two-semester trial period, administrative concerns and practical issues will be discussed as well as feedback from students, faculty and tutors about the effectiveness, user-friendliness and relative contribution of the software to the overall learning process.

Keywords: English academic writing; learner autonomy; pedagogy; plagiarism; Turnitin; Japan

Introduction

Over the past decades, advances in technology have greatly impacted the way we perceive the world and participate in it, both professionally and in our daily lives. Knowledge is at our fingertips and is acquired and shared freely, without regard to its origin or creator. This poses a problem in economic terms as well as in terms of legal consequences and political repercussions. Educational institutions are located at the crossroads of how to address, teach and evaluate students' interaction with this new kind of technologically-mediated knowledge creation and reproduction. Plagiarism, and the wider principle of academic honesty, is one of the central issues universities have to grapple with at all levels. This paper aims to contribute to the discussion by describing and evaluating the use of a commercial anti-plagiarism software package to sensitize students to the challenge, provide them with the theoretical and practical means to take control of their academic production, and turn the same technology that is part of the problem into part of the solution.

Literature review

Academic honesty, or the lack thereof, and plagiarism are not concepts that have been created in response to the internet. The related term "intellectual property", has its origin in the 19th century, although it was not popularized until the 20th century (Lemley, 2005); indeed, until the establishment of professional associations such as MLA and APA, no clear guidelines on citing others' work existed in academia

(Simmons, 1999). Nevertheless, few educators will dispute the claim that cases of plagiarism and detection of such misconduct have reached significant levels. According to a 2016 *Times* investigation, 50,000 students in the UK alone had been identified as guilty of plagiarism over the previous three years (Mostrous & Kenber, 2016). A decade earlier, a meta-study examining literature on plagiarism research had documented widespread use of cheating across institutions and levels of schooling (Ercegovac & Richardson, 2004). However, as the latter authors emphasize, rather than blame the internet for the unprecedented rise in undocumented copying, the focus should be on how to curb the trend.

One approach consists of harnessing technology in order to reign in its own excess. Using plagiarism detection software to detect cases of deliberate or even unintentional misuse of information may help to both identify problems and reduce instances of this type in the future. One such example is *Turnitin*, a market leader in commercial anti-plagiarism services, which after its foundation in 1997, served 400 institutions by 2003 (Foster, 2002) and expanded to a self-reported 15,000 institutions worldwide in 2017 (Turnitin, n.d.). The use of this software, however, is not entirely non-controversial among faculty and students, who either accuse the company of making a profit based on the intellectual output of students or complain that a presumption of guilt is the wrong premise for implementing across-the-board plagiarism checks. Conversely, this paper argues that technology, if applied judiciously within a framework of learner autonomy (as defined by Holec, 1981) and process writing (see Milner, Milner, & Mitchell, 2012; White & Arndt, 1997), can become an aspiring writer's handy tool.

Previous studies on the use of *Turnitin* for the detection and prevention of plagiarism have already suggested these benefits. While the traditional approach was to use it as a deterrent (Heckler, Rice, & Bryan, 2013; Stapleton, 2012; Walker, 2010), there has been a move from plagiarism detection to awareness raising (Batane, 2010; Mansoor & Ameen, 2016) and on to self-check and feedback opportunities (Buckley & Cowap, 2013; Chew, Ding, & Rowell, 2015; Rolfe, 2011). Whereas limitations have been pointed out (Heather, 2010; Kaner & Fiedler, 2008) and copyright concerns raised (Purdy, 2009; Talab, 2004), important issues to be addressed include the common phenomenon of self-plagiarism (Sun & Yang, 2015) and so-called patchwriting, or inappropriate paraphrasing due to a lack of linguistic competence (Li & Casanave, 2012), requiring a judicious use of anti-plagiarism software. In the end, students seem to recognize the benefits (Sheridan, Alany, & Brake, 2005), but for the time being, the regulation versus development debate is ongoing (Penketh & Beaumont, 2014).

Rationale

In order to illustrate those tensions arising from the multiple purposes and applications of anti-plagiarism software, this paper will report on and critically evaluate the introduction of *Turnitin* in conjunction with writing tutorials at a College of International Relations at a large-scale private university in western Japan. The college offers English-medium and Japanese-medium degrees as well as a joint-degree programme with an American university. It also sends the largest contingent of Japanese students to short-term and long-term study abroad and exchange programmes.

Turnitin was introduced to benefit students by: (1) preparing them for study abroad experiences that tend to set higher standards of academic writing including plagiarism avoidance; (2) improving their academic writing competence in citing sources and avoiding typical ESL grammar mistakes; (3) adding a further feedback loop in addition to those provided by their peers, the tutors and their teacher; (4) introducing an

opportunity for students to evaluate their work independently; and (5) ensuring fair student evaluation by holding all students to the same verifiable standards of academic integrity. Some recurring, serious cases of plagiarism in the past also contributed to this choice.

The main reason for choosing to include anti-plagiarism software into the writing process, however, was the important contribution it could provide from a pedagogical perspective. *Turnitin* lends itself to developing learner autonomy, since students can check their own originality reports and also upload assignments multiple times before the deadline. It is also a useful teaching device since it illustrates very concretely the sometimes difficult concepts of paraphrasing and citing as well as the many layers of academic (dis)honesty. From a linguistic standpoint, the grammar check function included in the programme aids students in improving their micro skills, again without the need for access to a teacher. Even the obvious weaknesses of the two main functions, originality report and grade mark, only serve to drive home the need for a closer look at the way students try to manipulate content and language.

Four other pedagogical benefits of implementing *Turnitin* are, firstly, its capacity for consciousness-raising in terms of critical media and digital literacy which are of importance with the current net-generation. Secondly, *Turnitin* offers opportunities for peer-collaboration through its peer review function which hones important editing and self-editing skills for their further university life. Thirdly, *Turnitin* provides support for a process writing approach because it enables teachers to set up multiple stages in the writing process, ensuring multiple drafts and consequently an improved central argument. Finally, the software also lends itself to the principle of prevention instead of punishment.

Methodology

Turnitin was integrated into the writing development process for mainly first-year students, and was targeted particularly at those enrolled in the English-medium programme who would eventually have to produce English-language academic papers and a graduation thesis written in English. In addition, advanced level students of the Japanese-medium programme, who were likely to go on exchange programmes, were also included in the trial. During the writing process students uploaded their first and second drafts to *Turnitin*, printed the originality report containing any potential cases of inappropriate use of source material as well as the grade mark report highlighting grammar issues, and brought those reports to two tutorial sessions which they had signed up for. One session focused on macro skills, the other on micro skills. This allowed tutors to address two of the main issues repeatedly affecting novice writers (plagiarism and grammar). In addition to this help from their tutors, students could also use the various explanatory tools of the *Turnitin* website to improve their writing. After their writing tutorial and a peer review session, students had the opportunity to rewrite their paper and upload a revised version as the software allows for various versions of one assignment.

The implementation of the anti-plagiarism software required a budget, administrative support and buy-in from teaching staff. To facilitate this, the use of *Turnitin* was tied to participation in a writing tutorial to ensure its adoption by both the administrative structure and colleagues who might be hesitant to use the software for its own benefits alone. In addition, faculty development sessions for less technologically-inclined members were held and more technologically-minded core staff members were available to assist in working out the details of the implementation. Policies about

student access as well as guidelines on how to incorporate usage into the syllabus had to be developed and this required staff hours. Once the software had been implemented an evaluation was conducted using an end-of-semester evaluation with students, faculty and tutors.

Turnitin was thus piloted as part of the writing development initiative of the College of International Relations in the fall semester of 2016 with a total of 50 students from the Japanese-medium programme and 32 students from the English-medium programme across two types of classes and with the support of five teachers, including a non-writing teacher who was coordinating the independent use of *Turnitin* among subject teachers. In addition to the regular pedagogical procedures as described above, these students were asked to complete a questionnaire at the end of the semester which focused on the assistance provided for the writing process during the tutorial and by the specific feature of *Turnitin* (Appendix 1). The return rate for questionnaires was 78% from the Japanese-medium group and 56% from the English-medium group. Teachers involved with the project were also asked to provide feedback.

Findings

Based on the questionnaire responses the following general evaluation can be presented. Both *Turnitin* and the tutorial, as combined in the project, were well-received by students. It is notable that the mean scores for all questionnaire items are well above the mid-point illustrating students' satisfaction. In terms of the effectiveness of *Turnitin* in helping with writing development (Table 1) the highest ranked item is, not surprisingly, its usefulness for recognizing plagiarism (ranked at a mean score of 8.21 out of 10) followed by helpfulness with grammar (7.39) and the development of self-editing skills (7.32). The overall experience with *Turnitin* was also ranked highly (Table 2). The most valued attribute was ease of use (ranked at a mean score of 3.96 out of 5). Students also expressed a desire for continued access to *Turnitin* for their other classes (3.79). They also considered it an effective tool for improving their writing (3.74) and that it had contributed to their overall learning experience (3.56). Responses about the effectiveness of specific aspects of the tutorial fell within a similar range to the use of *Turnitin* (Table 3) and the general usefulness of the tutorial was rated even higher than that of *Turnitin* (Table 4).

It is clear from the data that while the overall experience with the writing tutorial was somewhat more highly evaluated, at the detailed level, both components (*Turnitin* and the tutorial) receive a high ranking from students.

Table 1. *Turnitin's* assistance with the writing process

Functions of <i>Turnitin</i>	Mean score (out of 10)
recognizing plagiarism	8.21
helping with grammar	7.39
developing self-editing skills	7.32

Table 2. Overall usefulness of *Turnitin*

Features	Mean score (out of 5)
being easy to use	3.96
providing continued access	3.79
being an effective tool	3.74
contributing to overall learning	3.56

Table 3. Usefulness of the tutorial in assistance with the writing process

	Mean score (out of 10)
word choice	8.21
grammar	7.96
essay and paragraph structure	7.95
in-text citation and referencing	7.95
strategies to revise my writing	7.71
my thesis statement/research question	7.7
topic and concluding sentences	7.42
transitions	7.24

Table 4. Overall usefulness of the tutorial in assistance with the writing process

	Mean score (out of 5)
The tutorial has been an effective support to improve my writing	4.32
I would like to be able to continue using the writing tutorial service	4.07

Students were also asked to provide some comments on their experience with *Turnitin* and the writing tutorial and explain both the best points and areas for improvement. The general tenor of the comments referred to the ease of use, for example, “easy to find mistakes, easy to submit, easy to rewrite”. Student autonomy also figures prominently, as in: “fix it, without asking, use by myself”. A further aspect was students' level of confidence in their writing, expressed in phrases such as: “become confident, prevent unconscious plagiarism, make sure no plagiarism”. Students also

appreciated the exact pinpointing of a problem as evidenced by statements like: “seeing the percentage of plagiarism, accurate, where I should rewrite.” A final theme that emerged referred to the automated feedback functions in words like: “report-like print-outs, makes automatic cover, auto-corrects.” Conversely, among the weaknesses of the programme, students detected some incoherent feedback: “grammar corrections strange, some feedback confusing, submit/due date unclear.” In addition, they realized that they did not have full autonomy in using the system: “cannot use it by myself or reuse, couldn't check grammar/only after teacher.” Finally, students pointed out some systemic issues such as: “good for grammar, not structure/transitions, counting references as copied, PC system – unlike tutorial.” Overall, it can be said that students had an overwhelmingly positive experience and attitude towards using this particular anti-plagiarism software and could make good use of its strong points.

Teachers coincided with students in embracing the system for the affordances it offers to students. Their feedback suggests that some of the main advantages are a noticeable reduction in, presumably, unintentional plagiarism such as patchwriting; a focus on learner autonomy; and a motivational boost because students receive immediate feedback. Similar to students' opinions, awareness and self-study were mentioned as was a shift in attitude of students toward a more professional and serious approach to the assignment. The benefits of multiple feedback and the fact that this programme expanded the learning environment outside of class were listed as additional bonuses. Overall, teachers were pleased with the results achieved with *Turnitin* and have since continued to use it and send their students to tutorials as well.

The majority of tutors were supportive of the combination of *Turnitin* and tutorial with one outlier who simply saw no benefit in the system. Interestingly, none of the tutors, who were either undergraduates in their final year or graduate students, had used the website before. According to the tutors, *Turnitin* was beneficial as it helped tutors and tutees. As the reports come pre-marked, tutors can readily hone in on the problematic points and thus use face-to-face time better for explanations. Tutors also emphasized the awareness-raising component of using such software, that “using copy/paste may not be the best strategy.” It also seemed to help tutors recognize that students face such problems in their writing. Among the negative points of the programme, tutors similar to students mentioned some misleading results and also brought up the fact that tutors also needed training with the software to understand what students were experiencing and having trouble with. One comment also referred to the fact that the software did not really help students recognize plagiarism, presumably since the offending passage had already been highlighted for them. Again, based on the questionnaires returned and the regular oral feedback from tutors, most were happy to include *Turnitin* as an additional resource available to students.

Discussion

As evidenced by the findings described above, anti-plagiarism software like *Turnitin* offers a variety of possibilities for use in the writing classroom and can reach beyond the classroom to offer an additional feedback loop that will then be reflected back in the work performed in class. The main benefit of a pedagogically oriented use of such software, passing responsibility for learning and checking their work to students, has been confirmed by the data. *Turnitin* clearly supports the development of learner autonomy, one of the cornerstones of lifelong learning. A related benefit of its use is the focus on process writing. At different times, students can be encouraged to focus on different aspects of their writing. In addition, *Turnitin* can turn insecure novice writers

into confident participants in academic discourse as they can avail themselves of an easy system that can direct their attention to the problem areas they need to fix.

Regarding the individual aspects of *Turnitin*, it is evident that students have developed a positive attitude towards this software tool and their responses support the teachers' rationale for using the programme. The main purpose of *Turnitin*, recognizing plagiarism, received the highest acceptance rate, followed by the grammar help function and the potential for self-editing skill development. Among the more general considerations about the use of *Turnitin*, the ease of use was apparent for these millennials, and they appreciated the programme to such an extent that they overwhelmingly wished for continued access in their other classes. From a pedagogical standpoint, they also considered the software an effective tool for writing improvement and, to a lesser extent, their overall learning experience. These findings indicate not only a positive attitude among students towards the use of *Turnitin*, but also an effective use of the tool. Similarly, teachers' and tutors' comments describing the awareness-raising potential, the motivational component and the tool-like character of the software underline the positive attitude to and experience with the use of *Turnitin* as a pedagogical instrument.

While detractors of anti-plagiarism software name copyright issues and presumption of guilt as concerns about usage of such software, no such arguments were raised in the data collected during this study. The points of improvement were more closely related to technical issues of access to certain functions and understandable weaknesses of the programme in recognizing certain features. However, these points serve to underline the need for a teacher or tutor to guide students rather than as an indication of lack of effectiveness of the software. Students' feedback can be read as wanting more of the service, being able to use it independently, receiving more detailed feedback, and having faster access to all functions. These drawbacks can be remedied on a case by case basis by the instructor, who can focus on what has not been addressed by the system in order to maximize quality feedback to students. Instructors are also the pivotal factor that can make *Turnitin* a success or failure. Though the system does the checking automatically, it needs to be set up and monitored, so a belief in computer-enhanced feedback and the willingness to spend time on operating the online environment are a necessary precondition.

Conclusion

Academic honesty, including the avoidance of plagiarism, can be a difficult concept to grasp for non-native writers, particularly if their language competence is not well-developed. They may consequently take short-cuts like patchwriting because the wording in the original is considered the more elegant way of expressing an idea than the clumsy discourse of the language learner. These learners need help from an easy-to-use, effective tool that allows them to clearly see their problem areas in writing to then try and revise the problematic passages independently. Putting a tool like *Turnitin* at the disposal of the current generation of learners provides them an intuitive platform to work on their writing as they are familiar with apps and online support services. It also offers almost immediate feedback and a cyclical feedback structure that ensures students can process and apply what they have learned. Some institutions and faculty treat academic misconduct such as plagiarism very harshly, leading to serious consequences for offenders that are usually detailed in a statement included on the university website and on individual syllabi. However, these rightfully strict rules can only morally be upheld if students are not set up for failure. They must be provided with

the best possible learning environment to ensure they understand about plagiarism. It is not a question of whether to use *Turnitin* or a similar product but how to use it to maximize student learning.

About the author

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Appendix 1: Questionnaire

Tutorial and Turnitin Evaluation - Students

Major IR GS

TOEFL placement score _____ TOEFL retake score if available _____

Tutorial feedback - The tutorial has helped me with

my thesis statement/research question	10--9--8--7--6--5--4--3--2--1 (10=very much,
essay and paragraph structure	10--9--8--7--6--5--4--3--2--1 1=very little)
topic and concluding sentences	10--9--8--7--6--5--4--3--2--1
transitions	10--9--8--7--6--5--4--3--2--1
grammar	10--9--8--7--6--5--4--3--2--1
word choice	10--9--8--7--6--5--4--3--2--1
in-text citation and referencing	10--9--8--7--6--5--4--3--2--1
strategies to revise my writing	10--9--8--7--6--5--4--3--2--1

other: _____

The tutorial has been an effective support to improve my writing 5--4--3--2--1 (5=agree,
I would like to be able to continue using the writing tutorial service 5--4--3--2--1 1=disagree)

Best point of tutorial: _____

Could be improved: _____

Turnitin feedback - The use of Turnitin has helped me with

recognizing plagiarism	10--9--8--7--6--5--4--3--2--1
spotting my main grammar mistakes	10--9--8--7--6--5--4--3--2--1
developing self-editing skills	10--9--8--7--6--5--4--3--2--1

other: _____

Turnitin is easy to use 5--4--3--2--1
Turnitin is an effective tool to improve my writing 5--4--3--2--1
Turnitin has contributed to my overall learning experience 5--4--3--2--1
I would like to continue to have access to Turnitin for my other classes 5--4--3--2--1

Best point of Turnitin: _____

Concerns about Turnitin: _____
