Investigating the use of the Plagiarism Reference Tariff

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The Benchmark Plagiarism Tariff (Tennant & Rowell, 2010) was developed in response to concerns regarding the variability of treatment meted out in cases of plagiarism in the higher education sector. This Tariff allocates scores to specific factors such as history, level and extent of the plagiarism and establishes a proposed Tariff of penalties based on those scores. This paper reports on a retrospective review of 155 cases of plagiarism from 9 HE institutions from the UK, Republic of Ireland and Australia. Each case was evaluated using the Tariff and the proposed penalty compared with the actual penalty awarded. When penalties were compared in absolute terms, only 54% matched overall and there was significant variation between institutions. The areas of mismatch are discussed and also types of case, such as collusion identified where the Tariff is not effective. Nonetheless, the Tariff does provide a useful benchmark for giving equivalent weight to different cases within and between institutions and offers the potential for application of a consistent range of penalties. Keywords: academic integrity, policy, plagiarism

Introduction

Along with the perception that there has been a significant increase in the incidence of plagiarism in higher education (Park, 2003; Carroll, 2004; Hart & Friesner, 2004; Duggan, 2006; Maurer, Kappe & Zaka, 2006) is an increasing level of concern regarding the variation in the treatment of students, identified as having plagiarised assignments, both between (Jones, 2006; Baty, 2006) and within institutions (Badge and Scott, 2008). The significant extent of this variation was detailed in the report of the AMBeR Project (Academic Misconduct Benchmarking Research Project) which reviewed practices across the UK (Tennant, Rowell & Duggan, 2007).

Variation in treatment clearly raises issues of equity for students and opens the way for there to be challenges to the penalties imposed (Baty, 2006). In this context, the annual reports of the Office of the Independent Adjudicator for Higher Education (OIA) in the UK have identified increases in the numbers of complaints pertaining to judgements of academic misconduct (OIA 2008; 2009). In recognition of the need for consistency of approach across institutions, Tennant and Rowell (2010) built on the outcomes of the AMBeR project to develop the Benchmark Plagiarism Tariff. This Tariff scheme '...represents a reference against which institutions can compare their own procedures, and use as an informed and practical framework when updating or constructing new penalty Tariffs for academic misconduct' (Tennant and Rowell, 2010, p13). However, the new penalty Tariff was in fact constructed with plagiarism in mind, and did not seek to include wider issues of academic misconduct.

The Benchmark Plagiarism Tariff

The Tariff was developed through a survey of the UK higher education sector asking respondents to identify which factors they considered to be important when assessing a case of plagiarism and to rank them. On that basis, the following five factors were identified as being the most significant (Figure 1):

- 1. History: has it happened before?
- 2. Amount/extent: relates to how much of the text was plagiarised and whether or not this text was a critical aspect of the task.
- 3. Level: how long the student has been at university
- 4. Value of assignment: standard task or large task (eg final thesis)
- 5. Additional characteristics: evidence of deliberate intent.

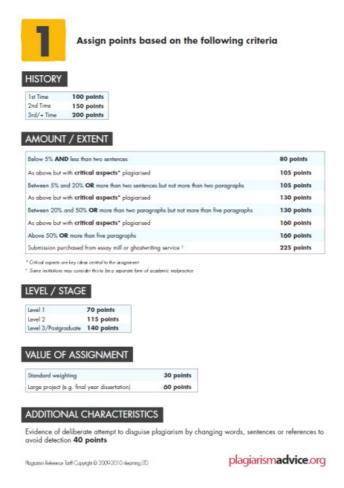


Figure 1: Plagiarism Reference Tariff section 1 (Tennant & Rowell, 2010). This scheme to allocate points to a case dependent on a variety of factors.

Subcategories were then identified for each factor and given a score based on the weighting associated with that factor. Thus, for example, for the first factor, History, incrementally weighted scores were allocated depending on whether it was the first, second or third instance (Figure 1). For each case the total score across all components is tallied, with the minimum possible being 280 and the maximum 665. A separate table in the Tariff outlines the proposed penalties that were deemed appropriate for the final score (Figure 2), these again having been derived from a synthesis of the responses to the survey (Tennant & Rowell, 2010).

Since a standardised tariff for dealing with instances of plagiarism is clearly welcome, the aim of this project was to explore the potential implementation of the Tariff. This was undertaken by a retrospective analysis of cases across a variety of higher education institutions in the UK, Republic of Ireland and Australia. For each case the score and proposed penalty was determined using the Tariff and then compared with the actual outcome of the judgement. From this consistency between the Tariff and actual penalties can be established. Participants were also asked to comment on cases that did not match the Tariff and why they thought this may be so. From this information, factors that impact on tariff use and consequent utility might be determined.

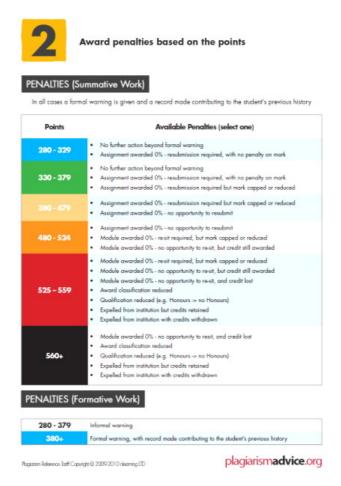


Figure 2: Plagiarism Reference Tariff section 2 (Tennant & Rowell, 2010). Shows the suggested penalties depending on the total score of points for each case.

Method

Interested parties present at the 4th International Plagiarism Conference in 2010 were asked to volunteer to participate in the project. An online meeting was held to discuss sample cases from two institutions and agree upon a standard method for using the Benchmark Plagiarism Tariff. It was agreed that each participant would re-examine cases of plagiarism that occurred within their own institution in the academic year 2009-2010 using the Tariff (one institution supplied data from 2010-2011). The Tariff score was calculated and compared to the penalty actually awarded by the institution.

Data collected sometimes related to a certain faculty/division or to a certain student group (e.g. under or post graduate students) as each participant sent only data from their area of the institution. A Microsoft *Excel* spreadsheet with drop down boxes for each of the categories on the Tariff was used by each participant to score their cases of academic misconduct. Choices made at each point automatically selected the appropriate score and these were then summed to create a total score. The suggested penalties for the total points scored were considered and a decision made as to whether the penalty recorded by the institution in 2009-2010 matched that suggested by the Benchmark Plagiarism Tariff. A note was made about the actual penalty that had been awarded for comparison and data purposes. The data were then collated and anonymised for further analysis. The decisions made by participants as to whether the actual penalty matched one of those suggested by the Tariff, based on the calculated score, were reviewed carefully for consistency across the different institutions by one of the authors. Participants were asked to comment on their reasons for stating that a penalty did not match the Tariff.

Underlying sampling biases

• Sampling was not consistent across the institutions due to the difficulty of accessing data and obtaining permissions and time for analysis (carried out by each institution themselves).

- The data are not representative of the higher education sector as a whole in the UK or internationally, the sample collection was biased by the use of a personal network.
- Collusions were excluded either by the institutions at source or during analysis.
- Some data were incomplete and were excluded prior to analysis.
- The category of 'additional characteristics' was applied only to cases where there was a record of an admission of intent by the student, or where staff had taken other considerations into account.

Limitations of the study

It is recognised that the data was from a sample of convenience and thus cannot claim to be representative of all universities.

The data was often also a subset of data from within a university, so could not claim to represent that whole dataset of that institution.

Results

Description of the data

In total, 155 cases were considered across nine institutions (7 UK, 2 non-UK). A small number of cases were excluded from this total; these included 11 cases of collusion and 9 cases with incomplete data. As will be discussed later, collusion cases were difficult to use with the Tariff scheme.

Table 1: Breakdown of number of cases by source and percentage match to Tariff

	Α	В	C	D	Е	F	G	Н	I	All cases
Number of cases	20	13	12	4	29	42	22	5	8	155
Percentage match to Tariff	25%	62%	50%	100%	90%	45%	18%	60%	100%	54%

Table 1 shows the number of cases analysed from each institution (anonymised as letters A to I). The percentage of cases judged to meet the Tariff penalty suggested by the Tariff score is shown. Judgement of matching was based on an exact match between the penalty awarded and that proposed in the Tariff. On this basis, it is apparent that the numbers of cases from each institution and the percentage agreement was widely divergent across the sample (Table 1).

The large majority of submissions were first offences (135/155 = 87%) and there is a bias towards third level/postgraduate cases (93/155 = 60%) possibly caused by the sampling method used with a bias towards institutions that taught postgraduate students.

Table 2: All 155 cases classified by level of study and previous case history

History and level	Level 1	Level 2	Level 3
First offence	30	23	82
Second offence	3	5	9
Third/ + offence	1	0	2

The data contained examples of a wide variety of cases spanning all of the Tariff categories of level, history and value, though few cases at bottom end of the amount/extent category were used. The most commonly recorded score for amount/extent was 130 points (51/155 cases, Figure 3). This point score equates to a judgement that the amount plagiarised was 'between 20% and 50% or more than two paragraphs but not more than five paragraphs'. The categories

which included an amount plagiarised with the additional comment of 'including critical aspects' were not well used. This could be due to sampling bias, or an underlying bias against making judgements about the nature of the plagiarism in favour of the more objective measure of amount in percentage terms.

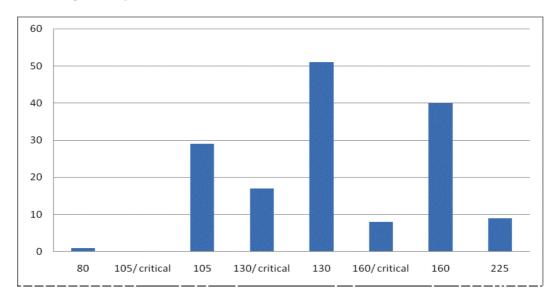


Figure 3: Frequency of cases in each penalty category for the amount/ extent plagiarism recorded and whether or not this included 'critical aspects' (n=155)

The majority of cases were considered to be of 'Standard weighting' (see Figure 1) (110/155), which includes all items of coursework other than major projects.

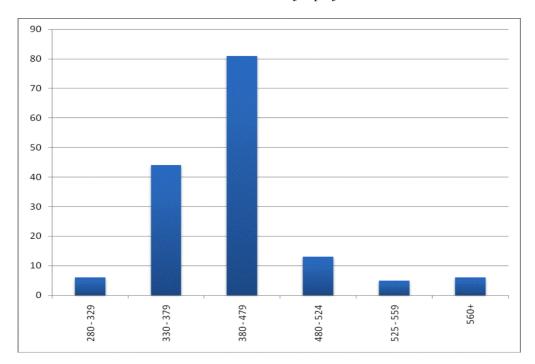


Figure 4: Frequency of cases in each Tariff penalty band

The utilisation of the additional characteristics category was considered problematic by participants in the project, in particular, identification of intent (Figure 1). It was agreed, for the purposes of this project, that this categorisation would be used only when intent was a point noted in the original case. As such, it was applied by sources for 45/155 cases.

Cases were submitted with total scores on the Tariff that included every penalty band on the Tariff. The maximum score recorded was 565, and the minimum was 305 (the theoretical minimum on the scale is 280 and the maximum 665). The most frequently occurring penalty scores lay in the range of 380-479 points (Figure 4).

The penalty actually awarded by the institution was examined against those suggested by the total score on the Reference Tariff. A decision was made for every case as to whether the actual penalty was 'matched' or 'did not match' the Tariff. Overall 54% of the cases considered did match the Tariff exactly in terms of the imposed penalty. In the remainder of the cases, there were variations in the penalty compared with the Tariff recommendations and these were classified into one of five different categories (Table 3):

Mismatch: There were 29 cases where a penalty that did exist within the Tariff was awarded but actually related to a score higher or lower than the Tariff would have awarded that penalty.

Mark deduction: There were 25 cases that had marks deducted from the assignment, either as a set amount (e.g. 10% deducted from total marks before plagiarism was taken into account) or the mark was derived from marking only the 'original' (i.e. non-plagiarised) sections of an assignment. The Tariff only allows for a reduced mark after the work has been resubmitted.

New: There were 11 cases where other types of penalty were awarded that did not feature at all in the Tariff. These were: suspension from an institution for a set period, resubmission of an assessment with no penalty on the original mark but capped at a pass, resubmission of work on a different topic and marks cancelled for a year with the student to retake the year capped at pass.

Resubmission: The Tariff only includes penalties where resubmission is permitted or denied. In four cases resubmission was not allowed because of the nature of the course structure.

Capped grade: In three cases a capped grade was awarded without requiring the student to resubmit the work. The Tariff only includes the penalty of a capped mark following resubmission and assignment mark of 0%.

Table 3: Analysis of cases which did not match the Tariff penalties, categorised by ty	pe.
The percentage of cases of each category is shown (n=155)	

	Number of cases (n=155)	% of all cases
Mismatch	29	18.7%
Mark deduction	25	16.1%
New	11	7.1%
Resubmission	4	2.5%
Capped grade	3	1.9%
Total	72	46.5%

Ease of use

The overall perception of participants in the project was that the scoring procedure for the Tariff was relatively straightforward for the majority of cases. For example, it was noted by two participants:

All the advisors liked the Tariff, though it was noted that it doesn't correspond directly to our classification and range of penalties

I do hope that the data gives some weight to the use and interpretation of the Tariff as I think it is clear to both students and staff

However, it was evident that certain issues, in particular collusion, which represents a significant element of case load, are not readily compatible with the Tariff scoring. As noted above, these were excluded from the scoring exercise, however, they will be considered further in the discussion.

It was also noted that none of the participants in the study utilised the penalties in relation to formative work. It was commented that this was because none of them currently considered giving penalties to formative work and therefore there were no cases to process through the Tariff.

Discussion

The key finding of this research is that while the Tariff was easy to use, it did not match exactly to the outcomes given in 54% of cases assessed. It is very apparent that some universities (or faculties within universities) appear to have very close alignment with the Tariff while others do not. There could be a number of reasons why this is so. The cases that were deemed not to match to the Tariff were examined further and manually coded into one of the five categories identified above.

The most common reason for an actual penalty not to agree with a Tariff penalty (18.7%) (Table 3) was a mismatch, such that a more lenient or harsh penalty had been awarded. These cases are areas where an institutional policy may be out of line with the suggested penalties available in the Tariff, or the institutional policy is founded on different principles. Some of the factors used by these universities mirrored the Tariff, such as stage of study, number of previous offences and amount of work affected. Other factors accepted by the Australian university included the students' learning background, academic conventions of the discipline, impact on progression (or visas), information provided to the students around academic integrity (AI) as part of their subject, cultural considerations, specific instructions for the completion of the assessment task, premeditation, student remorse, offence committed under duress (pressure from other students), a lesser role played by a student in cases of collusion and "exceptional circumstance". Academics consciously (or unconsciously) allowing for such factors, may account for some of the mismatch seen in both the awarding of higher or lower penalties than the Tariff would recommend. Interestingly, recent work by Bretag et al. (2011) as part of their larger ALTC project found that 11 of 39 Australian universities (28%) specifically comment of the use of intent to be taken into account when calculating the outcome for any one breach.

Although resubmission can be an excellent educative process for students not all universities, or Faculties within universities allow resubmission. A key argument for not allowing resubmission is that if all failing papers were allowed to resubmit then the sheer numbers in big classes make it impractical due to workload. A further argument is the perception that students who plagiarise may be treated less harshly than those who simply fail in terms of poor content.

The penalty most commonly used by institutions that was not present in the Tariff, was a mark deduction. This was either operated as marking 'original' work, or by direct removal of marks following moderation. A second group of penalties not included in the Tariff were denoted as 'new' as they did not conform to an easily defined class. These penalties were typically severe and could perhaps be accommodated by the consequences of some of the penalties available on the Tariff in the 525-559 band.

It could be, then, that there is a link between the inability to resubmit, mark deduction, and a capped grade, where academic staff are finding alternative ways of penalising AI breaches. Alternatively, for less serious breaches, it may be that the student has indicated a clear understanding of their mistake at the interview with the staff and no further education is deemed necessary at this time.

Usability of the Tariff

Most staff commented that the Tariff was easy to use and more flexible than first appears. For cases of plagiarism, and where resubmission was allowed, there was a strong correlation with the Tariff. However a number of problems were encountered with the Tariff.

Collusion could be a case where students have worked together, or where one has copied from another. If there is copying, where the original paper was willingly lent, some institutions penalise both parties equally, claiming that lending the work is a key component of collusion. However when judged by the Tariff, it is difficult to assign an 'amount/ extent 'of copied material for the lender as their work is original. If the students have worked together collaboratively, when individual effort was required, then the Tariff is also very difficult to apply.

The Tariff does not recognise the use of factors other than history, extent or year level. When devising the Tariff, Tennant and Rowell (2010) surveyed respondents about extenuating circumstances and it was decided that this should not be explicitly included in the system, as it was felt that extenuating circumstances could either be accommodated within the choice of penalties available or through reference to a separate authority within the institution. Carroll and Seymour (2006) make an argument against the use of extenuating circumstance as it can lead to inconsistencies. However, their paper makes it clear that there was a divide between those staff who thought flexibility was important and those who felt that consistency was. The Tariff, if used explicitly would provide consistency, but it is clear that a number of staff are influenced by factors not accounted for by the Tariff.

A lack of understanding or clarity in policy may have led to some of the issues noted. A differentiation between dealing with cases in a department or faculty and then at institutional level was identified. Different, and not necessarily consistent, penalties may be available to the two bodies. Some universities have clear polices about who can impose certain levels of penalties. Hence referring the case 'upwards' for more serious breaches should not be seen as a penalty itself, but rather recognition that a severe outcome is not imposed without the consideration of more than one individual. A policy should fit together in a single organised system. It needs to reflect all the aspects of AI and clearly state the outcomes of breaches and the appropriate strategies for students and staff to follow.

Another vexed issue is that that of a "guilty plea". Yeo and Chen (2007) included in their work a category of student remorse... "Student remorse: students genuinely repentant and willing to correct their work might be treated more leniently" (p. 190). Bretag and Green (2010) in their study found that in 8% of cases analysed Academic Integrity Officers used this as a factor when evaluating the case. Their concern was that if students were allowed to use remorse as a barging plea they may do so to in the hope of receiving a lighter penalty or to get through the process quickly, whether or not they have actually committed the alleged AI breach. Two institutions in the current study made use of this category where students had admitted to copying work without acknowledgement at panel hearings or in other interview situations. The Tariff makes no allowance for a guilty plea. Tennant and Rowell (2010) deliberately removed the word 'intent' from the Tariff due to conflicting views about its use and potential problems with its effect. There was concern that 'double counting' could occur when intent was related to previous history and the amount of work plagiarised, perhaps this has still not been interpreted correctly by the users of the Tariff in this study.

The calculation of penalties for project work proved problematic. One case highlighted that it is possible to have a score of 355 with a large project assignment (for a first offence with the lowest amount extent in the second year of study) but the 330-379 band does not include a penalty appropriate for a project. Equally, the lowest score for a project undertaken in the third year of study would be 380. Across some of the programmes included in this study, a project

may be an independent research project accounting for as much as a sixth of the final degree marks (40 credits of 240). This type of project would therefore carry significantly more weight than a modular assignment. However, the Tariff penalty bands of 330-379 and 380-479 do not include any module level penalties, only assignment level ones. This appears to be out of line with the severity of the impact of a 0% mark for a large project.

Two universities reflected on the conundrum that arises when national bodies or professional associations say they require documentation from universities that their graduates are fit to practice (eg medicine, law, and health-related professions).

If universities are required by law to pass on information regarding AI breaches to these bodies, and if this information, regardless of how minor, affects the student's ability to register in their chosen profession at the end of their degree, then this may affect outcomes that are given for AI breaches. If the university stays true to its own values around educational integrity then all students should be treated the same and all breaches should be dealt with appropriately. Whilst the Tariff does not include reference to these reporting procedures, this situation came up several times in our discussions about the usability of the Tariff, leading to a clear indication that staff were concerned about handling these cases and the long lasting effect they may have on a student's professional career. If the intention of the Tariff is to make all penalties explicit, this is perhaps an area where penalties may be hidden to avoid the knock on effect of one penalty on professional registration. A further consideration within the UK, will be the impact of the introduction of the Higher Education Achievement Record (HEAR) within which potential employers will have access to full transcripts of marks and therefore minor penalties, that would have been hidden within an overall degree classification, may be explicitly evident. Given the issues around this area, it is perhaps worth further investigation.

The Tariff makes the assumption that all universities work on the traditional progressive structure (eg level 1, level 2 etc). For those universities with a truly modular structure that does not progress from first year to third year of study the levels/stage component of the Tariff presents difficulty. The assignation of 70, 115 or 70 points could change a student from one cluster into another, thus significantly varying the penalties able to be given.

Conclusion

If it is accepted that AI includes "...plagiarism...cheating in exams or assignments, collusion, theft of other students' work, paying a third party for assignments, downloading whole or part of assignments from the Internet, falsification of data, misrepresentation of records, fraudulent publishing practices or any other action that undermines the integrity of scholarship and research' as defined by Bretag et al. (2010) then it is clear that the Tariff is not the definitive tool for evaluating appropriate penalties as it deals only with the breach of plagiarism. However, this is all it set out to do. Even within this component of AI breach difficulties arose as some universities did not offer the option of the key outcome of resubmission, and as some staff superimposed factors that were not accounted for in the Tariff. Nonetheless, the Tariff does provide a useful benchmark for giving equivalent weight to different cases within and between institutions and offers the potential for application of a consistent range of penalties. Further evaluation of the Tariff using complete datasets from a range of universities could be analysed to see if the trends seen in this study are replicated. These data could offer a basis for suggested improvements to the Tariff.

The use of the Tariff as research or benchmarking tool could assist institutions looking to address some of the key concerns regarding equity, consistency and fairness in the students who have plagiarised their work. If implemented on a wider cross-institutional scale, the impact could be even greater.

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