

Anonymous marking in Higher Education: A review of literature for practitioners

John G. Sharp¹ and Xiaotong Zhu²

¹Professor of Higher Education and Head of the Lincoln Higher Education Research Institute (LHERI); ²Dr Xiaotong Zhu Research Fellow in the Lincoln Higher Education Research Institute (LHERI)

Abstract

This review of anonymous marking literature incorporates 33 of the most frequently cited and perhaps more seminal works available in mainstream academic journals and other sources published between 1984 and 2019, with an emphasis on the more recent of these, including two particularly important studies conducted in the UK. Included are online media and other reports where the anonymous marking debate spilled over into the public domain as a notable and particularly newsworthy item for discussion. Together they provide a relatively detailed overview of the field of anonymous marking as a whole, highlighting key points in time, and drawing attention to the sensitivities and complexities associated with anonymous marking as a component of 'social justice' concerns in the UK Higher Education system from a range of stakeholder interests. In essence, and despite its perceived importance in some quarters, the application and use of anonymous marking in practice remains largely contested and inconclusive. While insufficient to rule it out completely, the case for introducing anonymous marking should be clearly articulated alongside careful consideration of resource demands and fitness for purpose.

Keywords

Anonymous marking, Higher Education, social justice, professional practice

Introduction and contextual background

The use of anonymous marking in Higher Education is an assessment strategy frequently adopted by universities around the world. While the reasons for its adoption are not always clear and transparent, a common perception among students and lecturers is of increased fairness through a reduction in marking bias, with discrimination and prejudice being frequently cited as contributing factors:

'The National Union of Students is calling on universities to introduce anonymous marking, after claiming that new research showed that students were the victims of racial and sex discrimination in their exam and assessment results.' (The Guardian, 1999)

'Lesbian, gay and trans students report that their coursework has been marked unfairly simply because of their gender expressions.' (NUS 2008)

'Relative to White students, those from every non-White ethnic group are less likely to obtain good degrees and less likely to obtain first class degrees ... the odds of a Black student being awarded a good degree were a third of those of a White student ...' (Richardson 2008: 10)

But to what extent is this perception valid, and does the use of anonymous marking justify the accompanying resource demands associated with its introduction? These are important questions for the sector as a whole, where student numbers continue to increase year on year alongside the demands on lecturers and their time. In order to address the questions raised, the literature incorporated here was initially identified from a key word search of educational databases including ERIC and Google Scholar. The abstracts of more promising items were subsequently read for relevance and their own reference lists back-searched and interrogated for further outputs. All items were subsequently filtered and reduced in number to admit only those 33 journal articles and other sources written in English, readily available in the public domain, and which met the stated purpose of the review itself. While not as rigorous an approach as might be adopted normally (Torgerson et al. 2012), the aim here was to inform practising academics and institutional leaders with sufficient insight to advance and manage debate in meaningful ways.

Anonymous marking: A terminological digression

From even the most cursory review of UK University websites and the posted information they contain, almost all institutions across the UK operate broadly similar assessment systems and marking or grading schemes throughout, though the actual language, terminology, practices and processes associated with assessment and marking or grading vary enormously. This falls into accordance with the nature of the work being considered (e.g. examination or coursework), the level and programme of study (e.g. year group and subject discipline), institutional organisation including Faculty, College or School (e.g. Arts, Science, Social Science, Humanities, Medicine) and policy or Code of Practice (assuming there is one). Marking practices and processes may also vary depending on purpose and whether a piece of work is

formative or diagnostic (usually open marked) or summative (usually open, second or anonymously marked). For many UK universities, it would seem, anonymous marking is mandatory, particularly when it is practical to do so, requiring 'special dispensation' or prior approval otherwise (though it should be noted that on the basis of published evidence some universities have recently revoked this requirement). Where anonymous marking is not always pedagogically advantageous or administratively viable, it is often a requirement to raise and discuss this in advance with students themselves (e.g. examples include presentations, performances, exhibitions, practical, placement or laboratory work, research projects, viva voce examinations, and so on). Interestingly, feedback on an anonymised basis, though considered possible, seems entirely impracticable to most, as does the notion of retaining the anonymity of marking staff themselves (it has been considered). A summary of associated definitions extracted from a small selection of online policy documents is provided as follows:

- **Anonymous marking:** A process in which the identity of the student is withheld at the point of marking (by using registration numbers, bar codes or some other anonymising device), designed to eliminate the potential for both conscious and unconscious bias or prejudice on the part of the examiner(s) and to protect them from accusations of discrimination, and to help reassure students that the assessment process is fair and impartial
- **Open or seen marking:** A single, suitably qualified internal marker knowing the identity of the student considers a piece of work against criteria and marks or grades accordingly, thereby providing a measure of student performance
- **Double, second or exchange marking:** Two markers consider a piece of work and agree a final mark between them, the second marker usually having sight of the first marker's grade and comments (not all work needs to be second marked, useful if inexperienced markers are involved - failure to agree a mark may result in a third and independent marker being required to adjudicate or moderate)
- **Blind marking:** Work is marked or graded independently by a second marker without any prior knowledge of the first marker's decisions until afterwards (adjudication and moderation may be required) – blind marking during which the identity of the student is also unknown to the second marker might be considered a variation of anonymous marking
- **Double-blind marking:** Each marker marks the work independently, neither is aware of the other's assessment or comments until afterwards (adjudication and moderation is essential, particularly in cases where the marks for any one student deviate by a specified amount and 'averaging' is not possible e.g. 5%)

- Internal and external moderation or review: Conducted post-assessment and pre-exam board by a single individual or a team in order to verify that the overall marks awarded are appropriate and consistent with respect to the marking criteria, the type and level of work involved, the feedback provided and the standard of the award (particularly important if large numbers of individual markers have been involved - ensures validity and reliability, marks may require normalisation, cohort scaling or adjustment if considered necessary), external examiners play a further and independent role in externally moderating in the scrutiny process but usually without the power to adjust individual marks (at some universities, the work is externally moderated anonymously also)

Across the sector, anonymous marking is most commonly applied in formal written examinations where it is relatively easy to administer (though not uniformly by any means).

Inconsistency and contradiction: A contested legacy

The notion of perceived discrimination and unfairness in marking practices is not a new phenomenon, with reports of conscious and unconscious bias emanating largely from the United States since at least the 1960s (and in schools as well as universities). Even then, and despite women students (sometimes men), Black students (sometimes White), less attractive students, less liked students, students with less appealing surnames, students not considered gifted or talented by others and students with disabilities or learning differences receiving poorer grades than others, the research evidence was far from consistent and, at times, contradictory. This resulted in a range of explanatory outcomes including flawed methodology (Malouff and Thorsteinson 2016).

In the UK, a strong 'sex bias' thread and ongoing reliability narrative emerged through the much-cited work of Bradley (1984). In essence, observed differences in academic achievement arising from written work at that time were often attributed to poor assessment criteria (favouring one group over the other), level of performance or inherent differences between the 'sexes' rather than differential marking between examiners (with women often evaluated less favourably where both 'sexes' performed highly, more favourably where not) or where the tasks themselves might be considered biased towards men in particular. As in the United States, much of the debate and ensuing attempts to replicate findings proved inconclusive, with authors, including Bradley herself, arguing over finer points of methodological detail or academic workload in some settings over others (Newstead and Dennis 1990; Bradley 1993; Dennis and Newstead 1994; see also Birch et al. 2016 for a more

recent account). Particular issues over the roles of second markers, considered to frequently mark less extremely or downgrade women, did help promote the introduction and consolidation of blind second marking as a working principle and to avoid so-called 'halo bias' where examiners may be influenced by expectation in particular. 'Halo bias', in which both prior experience with and knowledge of a student can influence outcome, and in two-part assessments involving a presentation alongside written work in particular (usually the former influencing the latter regardless of the quality of the latter), was reason alone to support anonymous marking in the work of Malouff et al. (2013, 2014). Of course, the fact that Bradley's original work could not be subsequently replicated elsewhere in the UK at that time should not be taken to mean that bias does not exist. It simply means that it did not exist at the sites in which replication was attempted or the means by which the replication was undertaken and the sample frames involved perhaps varied. It is also important to note 'scale' and level of detail. In addition to the dearth of studies also available at that time, bias in any marking if it exists is unlikely to occur at departmental, programme or even disciplinary level but more so probably at the level of the module or the marking individual.

Gender studies associated with marking student work in the UK subsequently diversified to consider the gender of the markers themselves and the nature of the feedback provided for students, again with inconsistent and inconclusive outcomes (e.g. Read et al. 2005). Interestingly, and in a recent case from Poland (Krawczyk 2018), a study of 2,607 bachelor's and master's theses considering gender and the physical attractiveness of students (an unlikely but nevertheless achievable method and scale were devised) appeared to demonstrate that on the basis of possible gender stereotyping alone, neither women nor men were marked any more favourably by their supervisors (known to them) or by external markers (not known to them) overall, observed differences often cancelling each other out. But men often did receive marginally higher grades than women raising questions over the reliability of written work marked by any one individual alone. The nature of the research design prohibited any further discussion (e.g. a detailed exploration of causal factors including support provided and perception of competence).

Picking up the baton: The National Union of Students (NUS)

Backed by the Commission for Racial Equality, the Equal Opportunities Commission and the QAA, the National Union of Students (NUS) has successfully lobbied UK universities and other key stakeholders to introduce anonymous marking since 1999 (BBC 1999; The Guardian 1999; TES 1999; HEA/ECU 2008), in common with other countries around the world (e.g. Shay and Jones 2006). Heavily publicised from

within the results of early research conducted on their behalf, conscious or unconscious bias or discrimination seemed evident with the marks awarded to Black students at one London university reported to be 4.2 percentage points lower than those awarded to their White peers. At a university in Wales, 42% of men were also reported to receive first or upper second-class degrees compared with 34% of women. In addition, Asian students taking one particular course at a Scottish university comprised 20% of the total student cohort but represented 80% of those who failed, and at a further university in the south-west of England, over 60% of students believed their marks would improve under an anonymous system. Operating in only a few universities at that time, the NUS consistently indicated that anonymous marking should be implemented 'universally' to remove any potential for bias thereby reducing the potential for fear and the likelihood of prejudice or discrimination on the basis of any characteristic, while safeguarding students, improving confidence in marking, assessment and feedback, and minimising any potential conflict within or suspicion of the academic community. Nearly 10 years on from their initial stance, and in their *'Mark my words, not my name'* campaign using National Student Survey outcomes to support their position, their argument had expanded to rightly include disabled, lesbian, gay and transgender students also. Interestingly, anonymous marking is taken by the NUS to include either marking by numbers or bar codes in the traditional sense or any form of double marking or the use of external markers in the assessment process.

Somewhat critical of institutional deliberation and hesitancy, the NUS carefully set out and argued a case against what they consider the common complaints and criticisms of anonymous marking to be (NUS 2008):

- Anonymous marking hampers the ability to give effective feedback to students
- Markers can recognise student handwriting or expressed position from their work in any case
- Anonymous marking won't remove gender bias because women write differently to men
- Anonymous marking and assessment is impossible for lab-based, performing arts and oral examinations
- Anonymous marking is burdensome, expensive and unnecessary
- There isn't enough research evidence available to support anonymous marking

A new millennium: The assessment and feedback dilemma

Since the publication of their initial report in 1999, and subsequent campaign, the sector has responded to the various positions presented by the NUS on anonymous marking in different ways, sometimes directly, sometimes indirectly, and with different degrees of enthusiasm (Bilal et al. 2012; TES 2007; Wonkhe 2019). One particular focus of concern was feedback and the whether or not that could be achieved anonymously (never a position actually adopted or promoted by the NUS). In an important but short piece by Whitelegg (2002), the issue of anonymous marking applied to a range of assessment contexts is explored in detail (see also Beals 2012). In addition to its advantages, Whitelegg also considered a broader range of other disadvantages:

- Disruption of the feedback loop (the inability to write for individual students or for students to receive personal comments resulting in a lowering of self-esteem)
- A reluctance on the part of weaker students to seek out advice (anonymous marking shifts the balance of responsibility)
- Non-differentiation (anonymous marking reduces the student body to a largely homogeneous group)
- Anonymous marking increases the distance between learner and lecturer (relationship breakdown)

Whitelegg concluded by emphasising the need to mark anonymously wherever appropriate but to feedback conventionally, maintaining the continuity and integration of the assessment process wherever possible and to promote the perceived good practices which do so. This would also extend to the notion of constructive feedback being used by staff and students to feed forward into future work, including making provision for support in the form of study and intellectual skills and the enhancement of academic practice more broadly including academic development and socialisation (HEA 2019; JISC 2019). Directly addressing the anonymous marking debate, the work of Brennan (2008) in Australia is particularly important, reviewing both the theoretical bias literature (and cognitive dissonance theories in which lecturer expectations of students might be challenged in different ways in particular and whether or not objective judgement is indeed possible at all) and empirical bias literature (highlighting the dearth of relevant research with which to draw sensible conclusions itself) in detail. Despite concluding that the possibility of interpersonal bias cannot be denied, Brennan also argues that Whitelegg's argument for the disruption of the feedback loop was not entirely convincing, with appropriate steps for

individual feedback to be easily incorporated ahead of the next assessment task. Brennan suggested instead that anonymous marking in assessment lacks 'authenticity' in so much as it stands directly against everything a student will encounter in later life when their work will always be open to scrutiny. Of perhaps more importance, Brennan also considered more speculatively that a high level of acquired and well-rehearsed strategic behaviour on the part of some students, essentially working out what it is lecturers and their forthcoming assessments actually want, may influence attendance, participation and engagement positively with anonymous marking an active de-motivator other than for those who simply want to 'scrape by'.

While accepting that marking and feedback are a normal part of everyday institutional life, Price et al. (2010) also remind us that while assessment and feedback effectiveness and an evaluation of its benefits might ultimately prove difficult if not impossible to determine, this nevertheless requires a high level of pedagogical and assessment literacy on the part of the student as mentioned earlier, and a trust in both marker and process which may not always be in place despite efforts to ensure transparency and consistency (Bloxham et al. 2011). Constructs within the variety of processes and procedures associated with assessment and feedback, including anonymous marking, are both complex and inter-related within which the student emotional response is also critical (Owen et al. 2010; Pitt and Norton 2017).

Recent UK research findings

In the first of two important and particularly recent studies conducted within the UK, Hinton and Higson (2017) considered the introduction of anonymous marking specifically in the context of reducing differential marking outcomes attracting some attention from the media (Inside Higher Ed 2017; TES 2017; The Student 2019). Published in *PLOS one*, the authors, based at Aston and Wolverhampton, looked in particular at the 'performance differences' in ethnicity, gender and socio-economic background in written examinations and coursework using an archive data set from 30,674 undergraduate participants spanning a twelve year period from 2001-2013 (49% female; 24% White British, 41% White overall and 45% Asian including 12% Chinese, 7% Black, 7% other). Anonymous marking was introduced at the single institution involved approximately half-way through the period. Considered the most frequently used summative assessment type across the UK, written examinations were chosen as these were thought to minimise the scope for academic misconduct in the form of plagiarism and collusion. The authors also noted that written examinations as a mode of assessment were also widely thought to disadvantage some groups over others (citing somewhat dated literature in support) as well as

causing high levels of student stress but over a relatively short period of time. In coursework, markers were also known to rate those students that they most closely perceive to be similar to them (Similarity Effect). Under such conditions, the introduction of anonymous marking should have had a positive effect on outcome by at least partially reducing Similarity Effect and other idiosyncratic assessment tendencies and bias (thought to account for as much as 62% of the variance in assessment of performance). Oral examinations would remain unaffected by anonymous marking for comparison. In conclusion, the outcomes, also reported in the popular media were summarised as follows (own observations incorporated):

'Despite supporters of anonymous marking claiming that its implementation has led to fairer assessment in Higher Education, the present study suggests that anonymous marking initiatives ... have done little to eliminate between-group mean performance differences [that said, standard deviations were much larger for Black students in all instances and within-group performance differences were ignored but important here]. Ethnic, gender and socioeconomic differences seem to be pervasive in academia, even after interventions aimed to reduce them ... Although these differences do exist, practically they are very small ... While even a single percentage point can potentially represent the difference between grades - or even, in some cases, the difference between degree classifications, it is the opinion of the author (sic) that this does not support the assertion that these assessment methods [examinations/coursework] show evidence of bias favouring one group over another.' (12)

It is worth pointing out, even here, that while compelling, interrogating such a large data set collected from across many different disciplines over time may have had the effect of 'smoothing' out variation which may have been evident at a more 'local' level as indicated earlier and where bias is perhaps most likely to occur.

In the second study, Pitt and Winstone (2018; see also Pitt and Norton 2017), based at Kent, explored the impact of anonymous marking on students' perceptions of fairness, feedback and their relationships with lecturers and whether the practice of anonymous marking influenced the nature of the feedback provided and the impact this had on future learning and development at another UK HEI. At the heart of their work, Pitt and Winstone also explored Whitelegg's notions of disrupted feedback loops and the perceived distance between students and lecturers. Working across four first year undergraduate subject areas including business, politics, pharmacy and French, Pitt and Winstone worked with a sample of 331 students who completed a questionnaire survey about fairness and experienced one semester long module

which was anonymously marked and three where it was marked non-anonymously. Assessment criteria and marking rubrics were employed in all instances and made available in module handbooks and on the VLE. Following broadly similar findings to those reported by Hinton and Higson with respect to ethnicity and gender, Pitt and Winstone also concluded that *'anonymous marking might undermine the learning potential of feedback'*, if also anonymised, at a time when dialogic feedback is on the increase, *'as well as minimise the strength of relationships between students and lecturers'* (1191-1192). They also found *'no evidence that non-anonymous marking had any deleterious effect on students' performance, nor that students found it to be unfair or biased (with the exception of some female students).'* They also concluded by noting the *'trade-off to be made between enhancing students' belief in the learning potential of feedback on the one hand, and ensuring perceptions of fairness and transparency on the other'* (for which anonymous marking was not the only solution), while making *'the assessment process transparent to students through continued dialogue, maintaining trust in the professionalism of academics, and promoting feedback as an ongoing process of dialogue'* to *'maintain the integrity of the assessment process without sacrificing the potential impact of feedback on students' learning and development.'*

Evidence-based conclusions and recommendations

Anonymous marking is one of many marking practices commonly employed across the UK Higher Education sector and for a variety of different reasons, many of which arguably achieve the same outcome if applied consistently and in consultation and dialogue with students themselves (e.g. to potentially reduce the likelihood of conscious and unconscious bias, to potentially level the playing field with respect to protected characteristics, to potentially improve student perception of fairness and transparency). From the work of Bradley (1984) and the NUS (1999-2008) to the studies published most recently by Hinton and Higson (2017) and Pitt and Winstone (2018), the evidence around anonymous marking's effectiveness is currently both inconclusive and inconsistent, though its contested nature is open to alternative interpretation as a result of close interrogation. It is also fair to remind ourselves that across the course of the anonymous marking 'debate' in the UK at least, the Higher Education sector has also changed somewhat dramatically with an accelerated growth in student numbers increasingly drawn from an increasingly diverse range of socio-economic and cultural backgrounds.

Intimately associated with curriculum design, teaching and learning strategy, and assessment and feedback as an integrated and constructively aligned whole, it would perhaps be prudent to at least discuss and consider the adoption of anonymous

marking with some care and only after informed professional discussion around the many issues presented here and following the clear formulation of a statement of intended purpose. It might also be considered prudent to adopt anonymous marking only after a formal review and audit of current assessment and marking practices in place as a whole, paying particularly attention to understanding areas where the highest differential attainment is evident and why that might be. Proceeding with a pilot intervention might also be helpful, and prior to widespread upscaling, with attention particularly directed towards the development of a shared assessment, marking and feedback literacy among both staff and students, helping to bring all parties closer together by improving relationships and channels of communication.

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