Degree outcomes and national calibration: debating academic standards in UK Geography.

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Calibration, degree outcomes, assessment, academic standards, grade inflation
Abstract

In this short intervention we report on work in progress by Advance HE (formerly the Higher Education Academy) in collaboration with professional bodies such as the RGS, which seeks to respond to public concerns about ‘grade inflation’ in relation to degree outcomes. We present an updated analysis of degree outcomes in UK geography for 2010-2016 showing a strong correlation between average A-level points score on entry and the proportion of good degrees awarded by UK geography departments. We then go on to report on the results of pilot training activities within the discipline to increase the use of social calibration techniques as a means of providing transparent assurance about the high quality of assessment practices. We conclude that there is good reason to engage positively and actively with the public debate about academic standards and we make the case for regular social calibration exercises to share marking practices across multiple institutions as a potential means of ensuring consistency, reliability and clarity in academic standards.

INTRODUCTION AND CONTEXT

The debate about academic standards and degree outcomes in Higher Education in the UK is increasingly prominent in political and media discussions (Gyimah, 2018; Richmond 2018; Woolcock, 2018; Yorke, 2018). For example, the Government Press Release marking the launch of the Office for Students (OfS) on January 1st 2018 ends by saying that the new regulator will “shine a light on the grade inflation we have seen tearing through the system.” Some academic research has also addressed the issue. Ray Bachan (2018) reports evidence
of ‘unexplained’ increases in good degree outcomes across a range of disciplines between the academic years 2010/11 to 2016/17, relative to 2007/08, concluding that such increases cannot be explained entirely by student quality and/or characteristics, or university expenditure on student and staff facilities and academic services.

In this short intervention we report on work in progress by Advance HE (formerly the Higher Education Academy) in collaboration with professional and subject bodies such as the RGS-IBG, which seeks to respond to this concern (Advance HE, 2018). We start by updating existing analyses of degree outcomes in UK geography (Chapman, 1993; Thornes, 2012a) and then go on to report on the results of pilot training activities within the discipline to increase the use of social calibration techniques as a means of providing transparent assurance about the high quality and consistency of assessment. This responds to the call for higher education institutions to make a statement of intent to assure standards, including ‘supporting the professional development of academic staff and external examiners to aid consistency and calibration of marking’ (UUK, GuildHE and QAA, 2018, p. 4). Social calibration entails regular, structured, face-to-face deliberations amongst groups of university teachers about the assessment of specific examples of student work. These discussions can take place both within and, crucially, between universities.

Our argument is that such assessment practices are logical, feasible, supported by evidence from research in education and are preferable to the more prominent alternative of including a disincentive for ‘grade inflation’ in the Teaching Excellence and Student Outcomes Framework (TEF). Our contention is that disciplinary communities have a role to play alongside individual universities in responding to this challenge (Bachan, 2017; UUK,
The initiatives outlined in this paper demonstrate an appetite for calibration of academic standards within the geography community and practical opportunities to complement the existing External Examiner system.

**UK GEOGRAPHY DEGREE OUTCOMES 2010-2016**

Higher Education Statistics Agency data (HESA, 2017a) show the longitudinal change in the proportion of students awarded a ‘good degree’ (a First or Upper Second) among first-degree qualifiers whose courses were classified as Geography between 2010/11 and 2015/16 inclusive. During this time 87 UK institutions awarded undergraduate geography degrees to 44,385 students. A sub-set of 46 institutions with a total of 400 or more first degree qualifiers in F8 and L7 between 2010/11 to 2015/16 were analysed, representing 53% of institutions awarding geography programmes and 83% of the students receiving awards.

In order to allow longitudinal comparison, we followed the method used by Thornes (2012a) when analysing these data. Longitudinally reconstructed and aggregated data must be treated with some caution. Chapman’s (1994) analysis for the period 1973 to 1990 relates to a context with far fewer geography departments and graduates. In addition, there are specific challenges for seeing this data as a continuous linear trend because of changes to the subject coding system, and faculty homes, for geography (Hall et al., 2015; Maddrell et al., 2015).
As Figure 1 shows, the proportion of good degrees awarded in geography has risen consistently since 1973 and accelerated sharply since 2005. The upward trend has continued over the period of our own analysis (2010-16). Geography has had a higher proportion of good degrees than the average for all subjects since 2010. Over 80% of geography students can currently expect to graduate with a good degree.

The qualifications students bring with them when qualifying for a degree programme, e.g. A-Levels and BTECs, are expressed numerically as a tariff entry score, which is calculated using a combination of qualification level, size and grade achieved (UCAS, 2019). The relationship between average tariff entry score and the proportion of good degrees awarded in geography departments (Figure 2) shows a strong positive correlation. A student with strong A-level results has an increased chance of graduating with a good degree. However, while many institutions with a tariff entry score of more than 400 have a commensurate proportion of good degrees above 80%, there is greater variability between entry grades and outcomes in the middle and lower end of the distribution. Here, greater fluctuation hints at the impact of the opportunities - and costs - of efforts to deliver good student outcomes.
Figure 1: Percentages of ‘good degrees’ over time
Figure 2: Mean tariff entry score against % of ‘good’ degrees
The remainder of this article is divided into two sections. First, we open a discussion about calibration of standards across the discipline in relation to ideas put forward by Advance HE. Second, we describe a social calibration grading experiment specifically in geography run through the RGS-IBG, which we hope will be taken up by colleagues across the country as part of their ongoing professional development. We conclude that there is good reason to engage positively and actively with the debate about academic standards.

**CALIBRATING STANDARDS: WHAT WORKS?**

Consistent marking between assessors, which reflects national standards, is vital for the reputation of the discipline in higher education and for confidence amongst students, graduates and employers. Indeed, there is both a formal requirement and a public expectation of comparability of UK awards, at least at the level of threshold academic standards (QAA, 2012). A Hefce review of external examining in the UK (Hefce, 2015) recommended regular calibration of external examiners’ standards within disciplinary communities.

Research undertaken over several decades in education has shown that the underlying standards against which student work is appraised are poorly understood and can vary substantially from one assessor to another (Sadler, 2013). To counter this, a variety of approaches have been developed to help reduce variation in standards within and across modules, programmes, and institutions (Table 1).
<table>
<thead>
<tr>
<th>Approach</th>
<th>Internal</th>
<th>External</th>
<th>Pre-</th>
<th>Post-</th>
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<tbody>
<tr>
<td>1. Peer scrutiny of module assessment</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>2. Briefing to module team on assessment expectations</td>
<td>✓</td>
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<td>3. Module team marks and discusses exemplar assignments</td>
<td>✓</td>
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<tr>
<td>4. Markers mark and discuss a common sample of work immediately prior to full marking</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>5. Use of a detailed marking scheme</td>
<td>✓</td>
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<td>6. Provision of a model answer</td>
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<td>7. Second marking of all work, resolving differences by discussion</td>
<td>✓</td>
<td></td>
<td>✓</td>
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<td>8. Moderation discussion after first marking, involving all markers on a module</td>
<td></td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>9. Moderation by comparing averages and distribution of marks given by each marker in the team</td>
<td>✓</td>
<td></td>
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<td>10. Examination board consideration of means and standard deviations of module marks</td>
<td>✓</td>
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<td>11. External examining</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>12. Markers having experience as external examiners at other institutions</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>13. Markers being members of a learned society or professional body</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>14. Markers being familiar with national reference points</td>
<td></td>
<td>✓</td>
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</table>

Table 1: Common approaches to reduce variation in the judgement of academic standards shown in relation to context (internal or external to an institution) and by timing (before or after teaching). (Information taken from the Professional Development Course for External Examiners, with kind permission from Advance HE.)
Some of the approaches in Table 1 are directly related to maintaining academic standards, such as sample second marking of student work and the use of external examiners. Others are more indirect processes, such as markers being members of a subject association or professional body. The table demonstrates a predominance of approaches concerned with internal consistency, local to a particular institution or department, rather than external or discipline-wide consistency. Equally, many approaches occur after teaching rather than before, providing some assurance that institutional assessment procedures have been observed but not necessarily guaranteeing appropriate ‘output’ or performance standards (Alderman, 2009). We might, therefore, question the benefit of many widely-adopted approaches in contributing significantly to the assurance of higher education standards (Bloxham et al., 2016a).

Codified written standards alone (for example, assessment criteria, qualification descriptors and benchmarking statements) rarely ensure consistency in the understanding of what constitutes quality because interpretation of written standards will always vary between assessors (Sadler, 2014). Assessors’ differing understanding of terms such as ‘adequate’, ‘good’ or ‘excellent’ means they interpret criteria differently, focus on different aspects of student work, value aspects not reflected in assessment criteria and make limited use of external reference points (Bloxham & Price, 2015). Furthermore, research suggests that criterion-based grading is still tacitly influenced by norm referencing (i.e. a piece of work is referenced against a hypothetical average student in a particular group rather than against the criteria) (Bloxham et al., 2011).
Over the course of their teaching experience, assessors construct personalised standards frameworks and group marking cultures; co-creating standards through local assessment practices and communities, mobilising tacit as well as explicit knowledge (Ashworth et al., 2010; Bloxham & Boyd, 2011; Bloxham & Price, 2015). As Figure 3 shows, the inputs to and influences upon personal marking cultures are many and varied, such that individuals’ standards frameworks can and will differ within departments.

![Figure 3: Influences on assessment](image)

One strategy for finding disciplinary agreement of standards is to move away from a reliance on moderation (agreeing marks internally post-teaching) and adopt calibration. Social calibration is sharing knowledge of standards prior to course delivery based on discussion of concrete examples and relevant external reference points.
Calibration supports assessors in consistently making grading decisions that are:
commensurate with the respective levels of academic achievement they represent;
comparable across course and institutional boundaries at any one point and over time; and
in line with both the discipline’s and society’s expectations of higher education graduates
(Sadler, 2009). Social calibration’s face-to-face dialogue approach encourages assessors to
establish a common vocabulary and set of meanings in relation to the criteria they are using
to judge the academic standards of pieces of work (Rust, 2009; Sadler, 2013; Bloxham &
Price, 2015). By justifying the rationales for their quality judgements and clarifying
meanings-in-use for the principal explanatory terms, assessors achieve greater consistency
in understanding and applying academic standards (Bloxham, 2009).

CALIBRATION IN GEOGRAPHY

The RGS-IBG has worked with the Higher Education Academy, now Advance HE, to pilot
methods for social calibration of academic standards amongst a group of geography
academics at national, regional and departmental scales. The structure of the pilot study
was framed by Advance HE who funded the data analysis and a small number of workshops
in a wide range of different disciplines. Dedicated geography workshop events have been
held to explore approaches to calibration: checking and aligning [appropriate] academic
standards and judgment-making ability against a range of reference points (Bloxham et al.,
2016b), using a social moderation approach that aims to foster the same grading judgments
for the same reasons amongst a group of disciplinary peers (Watty et al., 2013).
Two calibration events for geographers from 20 institutions across England, and a third workshop with all the members of a single geography department took place in 2016 and 2017. Before these workshops participants were provided with a set of anonymised student work from an undisclosed institution, and they assessed this privately in advance, grading and submitting comments to justify the mark. Working in groups of 3 or 4 at the workshops, each participant justified to their group the grades they had awarded the work, clarifying key criteria used in their decision-making. In the open and constructive process of agreeing a grade in a small team, individuals worked through any sticking points to achieve consensus over the criteria and how they were employed. The small teams then reconvened into the larger workshop group, which went through a second iteration of discussion over the marks awarded.

In evaluation surveys and other post-workshop reflections, all participants agreed that these events helped to improve understanding of academic standards in geography and to calibrate their standards against those of colleagues. Participants had to find a shared assessment language, initially to clarify what specific criteria meant, then how these criteria articulated quality, as the following quotations from the departmental workshop reveal:

“It was illuminating to see how even our [department] approached the task quite differently and valued different aspects of the assignment. It was encouraging to discuss this together and eventually reach a consensus that made sense to us all.”

[Participant 2]
“The marking calibration exercise highlighted how different interpretations of the assessment criteria (e.g. the meaning of critical analysis) can lead to a difference in the grade awarded.”

[Participant 4]

Working across institutions lengthened the calibration process. Initially, participants had to ‘translate’ the marking criteria provided in relation to their own institution’s assessment culture, before cross-checking with other participants against the geography benchmark standards. The act of translation, in forming a shared language of quality standards, meant that some participants gained extra perspectives to take back:

“I thought this would be useful for me beyond the confines of my department, when its greatest role will be in improving both my practice and that of my colleagues internally.”

[Participant 16, national benchmarking workshop]

The social calibration approach was piloted at a disciplinary scale, particularly by repeatedly relating student work to the Geography Subject Benchmark Statement (QAA, 2014), whilst still maintaining departmental autonomy over syllabi, forms of assessment and marking criteria/rubrics. The process helped to clarify not only the impact of criterion-referenced marking (where explicit criteria related to learning outcomes are provided) versus implicit benchmarks of quality, but also the importance of assessment-specific criteria (e.g. exam, essay, presentation, dissertation proposal, etc.) and the familiarity of markers with that assessment type:
“Despite giving pretty consistent marks, people interpreted the criteria quite differently. Critical evaluation meant critique of the literature for one marker, whereas for another they expected the student to critique their own research design.” [Participant 9, departmental workshop].

In the autumn of 2018 Advance HE and the RGS-IBG ran a regional professional development course for geography external examiners involving staff from eight different institutions. Initial marking of three final year coursework essays revealed some variations within the group in the proposed grade. These differences existed between individuals rather than between types of HE institution. Despite the initial variation, the outcome of the calibration deliberations was commonly agreed marks for all three essays across all participants, based on shared views about key characteristics and drawing on relevant external reference points. Workshops like this illustrate how social calibration could strengthen and support the external examining process.

Pilot exercises have now taken place at departmental, regional and national scales and all have had positive feedback from participants in terms of advancing their understanding of shared standards. The workshops have highlighted the opportunity to calibrate both the inputs to the assessment process (assessment task, marking rubrics) and the outputs (student work, application of making criteria). However, the impact of social calibration would be improved by wider levels of participation because it is the very act of deliberating on specific pieces of work among colleagues that is important. Whilst external examiners might have specific responsibilities for commenting on standards across different
institutions, social calibration would benefit all of those marking student work in higher education.

CONCLUSIONS

Disciplinary data show that the proportion of good degrees awarded in UK geography has increased steadily since 1973 and sharply since 2005. This has raised questions about academic standards and the consistency of assessment. In response Advance HE has been experimenting with social calibration in a number of disciplines.

The initiatives outlined in this paper demonstrate an appetite for calibration of academic standards within the geography community. Geography is one of the few subjects in the UK that has started to establish cross-institutional calibration activities for aspiring, new and experienced External Examiners. As such, we argue here for the continuation of an assessor-centred collaborative approach controlled by professional geographers to protect the value of geography degrees. This is optimally achieved through social calibration activities that centre on face-to-face dialogue about standards pre-assessment, within disciplinary communities of assessment practice, in order to identify key influential characteristics of assessed work. This approach works best when it uses explicit consensus-building processes that refer to specific examples of student work. A Geography Calibration Toolkit has been designed by the RGS-IBG and Advance HE specifically for this purpose (available at: https://www.heacademy.ac.uk/form/geography-calibration-toolkit-en).
Calibration is arguably the most promising and intellectually reasoned new proposal for achieving acceptable comparability of academic standards in the discipline. We recommend the adoption of calibration within our subject community, at a variety of scales and over space and time, in order to strive for a sustainable process that can iterate between teaching teams, departments, external examiners and the national disciplinary community. This would represent a robust supplement to the existing external examiner system and would connect departmental and national level calibrations. To become reality, this requires support at national level from government, the RGS-IBG and higher education institutions. The impetus to strive for this community of practice perhaps comes with publication in May 2019 of the UKSCQA Degree Classification Statement of Intent (UKSCQA, 2019). This document calls for HEIs in England (and across the UK via similar mechanisms) to publish a ‘degree outcomes statement’ in the academic year 2019-20 following internal institutional review. The review should include whether assessment criteria meet common sector reference points and are applied consistently by academic staff and external examiners, and whether the institution is making use of Advance HE’s external examiner professional development programme and subject-specific calibration activity, or providing alternative arrangements.

Standards are as much about trust as they are about education and knowledge. Students, post-graduate admissions tutors, employers, tax-payers and politicians are asked to trust college and university teachers to maintain undergraduate degree standards. It is strategic for geographers who teach in universities to be seen to respond proactively to public concerns. While moderation after assessment might appear sufficient for internal
institutional quality assurance, it is ineffective for calibration at the scale of degree outcomes when comparing departments. Social calibration, taking place before teaching begins and referencing external benchmarks, adopts face-to-face discussions about standards with colleagues in relation to specific examples of student work. This activity can be built into the teaching and assessment process within institutions (or groups of institutions), but the impact is amplified when it is combined with similar social calibration activities undertaken by groups of external examiners organised by the RGS-IBG. The ultimate goal is to align personal standards frameworks and academic standards within and across institutions with those expected by the discipline, professions, subject and accrediting bodies, employers and the public (Sadler, 2011). Social calibration carries considerable weight with educational practitioners (Watty et al., 2013; O’Connell et al., 2016) even though it is at an early stage in development.

As this paper goes to press, the RGS-IBG continues to support social calibration within geography across multiple scales, working with Advance HE (as part of the Degree Standards Project). Widespread adoption of such professional development may help to reassure higher education stakeholders that degree outcomes are assessed with consistency across institutions and over time, and that any increase in ‘good degree’ outcomes in geography is the result of both improved teaching and of improved student learning.
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Questioning popular assumptions about the causes of the increasing proportion of ‘good degrees’ is not really effective when trying to convince those outside universities about the rigorousness of assessment (Thornes,
Nevertheless, it is possible that the journalistic and political panic over ‘grade inflation’ has obscured improvements in teaching and learning in recent years.

The Teaching Excellence and Student Outcomes Framework (TEF) was introduced in 2016 to reward excellent teaching in UK higher education providers. Participation in TEF is currently voluntary. Of the 300 institutions now holding a TEF award, the great majority are in England with much lower levels of participation in Scotland, Wales and Northern Ireland. In 2017 the Department of Education warned that ‘Unchecked, grade inflation could undermine the reputation of the entire UK HE sector, creating a dangerous impression of slipping standards, undermining the efforts of those who work hard for their qualifications, and poorly serving the needs of employers’ (DfE, 2017, p. 56). It therefore introduced a grade inflation metric to the TEF, stating that ‘The proportions of 2:1s and firsts awarded will not be considered to provide any positive evidence as to the excellence of teaching or outcomes at that provider.’ (DfE, 2017, p. 57). The intention is to use the TEF to reward those universities that can show they are actively seeking to tackle ‘grade inflation’.

The data were obtained from the Higher Education Statistics Agency (HESA) Student Record by the Royal Geographical Society (with IBG), who hold the license for their use: The number of qualifiers studying subjects F8: Physical Geographical Sciences or L7: Human and Social Geography at UK HE Providers with Level of qualification obtained [First degree used for analysis]; Class of first degree; Total tariff [tariffable highest qualification on entry], 2010/11 to 2015/16 inclusive. HESA’s standard rounding methodologies have been applied. HESA cannot accept responsibility for any inferences or conclusions derived from the data by third parties.