UNIVERSITY OF
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Cambridge Centre for
Teaching and Learning

Awarding gaps and assessment: a briefing paper for EAC
Foundations in Assessment paper 1

March 2021, Dr Ruth Walker

This briefing paper is the first in a series planned to supplement Cambridge's *Framework for Assessment* by providing fuller definitions and explanations of key terms and concepts around assessment practices. Following papers will discuss aligning assessment to learning outcomes, and approaches to effective assessment design.

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1. Introduction: the Cambridge context

This paper provides an overview of the rationale, with supporting literature, for the University's encouragement of the diversification of assessment methods and conditions away from traditional exams, to more creative and innovative forms of assessment, as proposed in Cambridge's *Examinations Review Report* (2017). Since then, the collegiate University has committed to eliminating the awarding gaps experienced in particular by Black British students and disabled students with declared mental health conditions by 2025 (University of Cambridge *Access and Participation Plan*, 2019-2025).

Traditional modes of assessment such as essays and timed invigilated examinations still have their place in the modern university and students benefit from them. However, as the differential outcomes or awarding gaps are determined by the allocation of classes to individual students according to their assessed academic performance, it is understood that the correlation between a programme's assessment practices and the award of a first class or good honours degree outcomes demands closer attention (RAFA2, 2020). At Cambridge, Education Services have concluded that taking steps to diversify assessment is a vital to narrow or eliminate these awarding gaps (Future of Assessment paper to EAC, 2021), understanding that this is one just initiative in what will be a range of approaches on awarding gaps, including those related to inclusive teaching and curricula, accessible learning environments, academic skills development and student wellbeing, transition to the university and sense of belonging.

2. Impact of assessment on students' lives

Assessment is a central feature of the educational experience, powerfully framing how students learn and what they achieve: "it is one of the most significant influences on students' experience of higher education and all that they gain from it" (Boud & Dochy, cited in Devlin & McKay 2018 p.83). A strong connection is increasingly recognised in the literature about higher education assessment between assessment and social justice. That is, assessment has an impact on students' current and future lives: their wellbeing, self-esteem, identity and social and economic opportunities (McArthur, 2018). Assessment practices – even before they are translated into degree awards and outcomes – play a very significant role:

What is at stake here is the nature of higher education itself. Assessment, rather than teaching, has a major influence on students' learning. It directs attention to what is important. It acts as an incentive for study. And it has a powerful effect on what students do and how they do it. Assessment also communicates to them what they can and cannot succeed in doing. For some, it builds their confidence for their future work; for others, it shows how inadequate they are as learners and undermines their confidence about what they can do in the future. (Boud & Falchikov, 2007, p3).

Leathwood (2005 p.318) notes that "future careers and earnings potential as well as health, status and self-esteem can all be affected by degree results". She links assessment to social justice issues: it is not just that assessment shapes students' lives, but that the experiences of assessment are not value-neutral as they work to reinforce particular social structures and divisions that are historically and culturally situated. McArthur (2018, p.31) summarises that higher educational assessment systems are entangled with issues of power and privilege; "in particular, it is the taken-for-granted status of assessment, our preparedness to just put up with it as the way things are, that enables its pervasive and negative impacts on the social world to continue - largely unnoticed".

The current sector-wide conversations about awarding gaps and assessment practices are a way of addressing these social justice concerns, as institutional approaches to assessment are thrown into sharper relief through the analysis of patterns of student achievement documented in assessment results. As Biggs and Tang (2011 p.221) have argued, "assessment is the senior partner in learning and teaching. Get it wrong and the rest collapses". In light of all this, it is increasingly difficult to rationalise three-hour invigilated examinations as the most appropriate method to assess Cambridge students' attainment of learning.

3. Diversifying assessment

Diversified assessment moves away from a reliance on exam-based assessment and instead focus on inclusive summative assessment practices that provides students with opportunities for discipline-specific or 'authentic' tasks to demonstrate their learning and development of a range of skills relevant to their course of study. It also provides staff with an opportunity for creativity and innovation in the design and development of assessments. High-stakes summative, timed assessment setting create a pressured assessment environment; generally however, the learning outcomes of the University's programmes do not require students to demonstrate knowledge or skills *under pressure*. This means that we can allow for more variety and choice in how we let students demonstrate they meet the learning outcomes through diversified assessment tasks. This also means more attention to inclusive approaches to assessment design, methods and conditions to enable all students to meet their programme's prescribed learning outcomes.

> The diversification of assessment meets the UK QAA regulatory framework, as expressed in its guiding principles:
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> - *Guiding Principle 3*: That assessment is approached holistically in course design, so that "variety helps develop a range of skills and competencies and assesses a range of learning styles" (note also

> the qualifier that this variety of assessment should meet "a need, based on academic judgement, and is not just for the sake of variety")
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> - *Guiding Principle 4:* That assessment is inclusive and equitable, so that "Every student has an equal opportunity to demonstrate their achievement through the assessment process, with no group or individual disadvantaged. In designing assessments, the needs of students are considered, including those studying at different locations, from different cultural/ educational backgrounds, with additional learning needs, or with protected characteristics"
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> (UK QAA Assessment 2018, p.5)

4. Inclusive assessment practices

An inclusive approach to assessment is crucial for student engagement and success (Cureton & Gravestock, 2018, p.58). The principle underpinning an inclusive curriculum, including assessment, is that it provides an accessible, engaging and relevant learning experience for all students, maximising retention and progression, while reflecting the needs of particular groups (Bloxham & Boyd, 2007, p. 139). Inclusive assessment incorporates diversity and flexibility in the overall assessment experiences, supported by special provisions where these are deemed appropriate and fair. It is therefore more practicable than an approach which caters specifically to individual differences through case-by-case adjustments to assessment conditions. It reduces the likelihood of certain groups or individuals being overlooked, stereotyped or perceived as 'problem' students and that responses to the awarding gap be framed around a 'deficit' approach.

Inclusive assessment does not mean lowering academic standards. As long as the learning outcomes can be achieved through equivalent means, inclusive assessment is a mechanism for safeguarding standards while maximising the possibility of success for all students. For instance, a key recommendation from *Re-imagining Attainment for All* (RAFA 2, 2020) is to provide greater transparency in the process of assessment and the communication of high expectations to all students; that is, a focus on 'assessment literacy'. Assessment literacy means having a sound knowledge of the connection between assessment and learning, the expectations of particular methods of assessment, and an understanding about how they will be evaluated (Price et al 2012). This is helpful for students as it enables them to progress in their learning by making the most of formative feedback and how they are progressing, and it is helpful for staff as it builds a shared understanding of assessment mapped across the programme. Cousin and Cureton (2012) observed that good assignment briefs increase assessment literacy for both staff and students, reduce student anxiety, and raise students' confidence in their ability to achieve and, crucially, impact on their attainment.

5. The 'deficit' approach

Conversations about awarding gaps are quite often framed by the 'student deficit model'. This concept attributes student characteristics as the main factor for explaining differences in attainment; "It follows in the deficit model that ownership, accountability and responsibility for inequalities do not reside with the institution but the individual" (EHRC 2019 p.98). This assumes that certain students lack skills, knowledge or experience rather than prompt an examination of university structures and the discrimination that exists within them (UUK & NUS 2019, p.16). A classic example of this involves recommendations to separate students from 'non-traditional' backgrounds and providing them with generic skills instruction to bring them up to the standard of others. However, as Hockings (2010 p 21) note, there was little evidence in earlier reviews of widening participation literature that this approach that is appropriate or effective.

Overall, the literature acknowledges the importance of explicitly refuting the deficit understanding of students in conversations about awarding gaps. However, it is persistent and will need to be factored into conversations amongst staff who might be wary of making significant changes to assessment in response to awarding gaps

experienced by relatively small numbers of students with protected characteristics, such as race or disability, or even smaller numbers of specifically Black British students or undergraduates with declared mental health conditions (the two most significant student groups experiencing awarding gaps at Cambridge).

6. Race, awarding gaps and assessment

There is considerable evidence that high-stakes summative exams disadvantage racially minoritised students (often referred to as 'BAME' students), who do not perform to their best ability. For instance, in research commissioned by The Higher Education Funding Council for England (HEFCE), Mountford-Zimdars et al. (2015) describe how different student groups indicate varying degrees of satisfaction with the higher education curricula, and with learning, teaching and assessment practices. Their research, which draws on various sources of data including interviews with university academics, indicates that assessment — and students' level of assessment literacy — is one of the core reasons behind differential outcomes for student groups, particularly BAME students. They suggest that that certain forms of assessment privilege certain types of students over others. This finding was backed up by *Closing the Gap: Black, Asian and Minority Ethnic Student Attainment at UK Universities* (UUK & NUS 2019), which outlines sector-wide initiatives to address the BAME attainment gaps, with many interventions focused on enhancing inclusive teaching and learning practices, including assessment and feedback.

In an era of widening participation, the emerging attention to awarding gaps incudes the recognition that the 'hidden curriculum' around examination practices can privilege particular cohorts of students over others. The hidden curriculum runs alongside the formal curriculum (class-room based, actively taught) and the informal curriculum (opportunities for learning that arise outside of formal teaching encounters). It involves the unwritten rules, assumptions, rituals and taken-for-granted aspects of assessment which students are expected to conform to, which are not necessarily evident in the formal curriculum, or known by students before they arrive at the University.

Montenegro and Jankowski (2017) have persuasively argued for diversified and inclusive assessment strategies to meet the goal of improving learning for *all* students, in ways that authentically document what students know and are capable of demonstrating. In addition, there are calls for careful considerations of unconscious bias around assessment practices – where previously the focus has been on implicit bias training for admissions and recruitment – in recognition that these can have a significant effect on the sense of belonging and attainment of BAME students (EHRC 2019).

Students writing assessment criteria

One intervention requires students to re-write assessment criteria in their own words. The rationale here is that all students may experience the difficulties imposed by opaque assessment criteria or unclear briefs – those barriers add value to the advantages that some students possess such as a social readiness to ask for help, and social networks that can be mobilised to help unpack such opaqueness. Where this barrier is removed, it benefits all students, but may disproportionately benefit those students who do not feel entitled to ask for clarification or who do not have the advantage of knowledgeable social networks.

(Mountford-Zimdars et al. 2015 p.68)

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7. Mental health, awarding gaps and assessment

One of the most significant awarding gaps at Cambridge is between students with declared mental health conditions and non-disabled students. The picture is complex, as it relies on data about students' declaration before admission, while many students registered with the DRC indicate that they chose not to declare pre-

admission, or were formally diagnosed with mental health conditions post admission. However, it is not difficult to speculate about the correlation between mental health and high-stakes end-of-year unseen invigilated examinations. Indeed, examination stress is associated with mental health difficulties including anxiety, depression, disordered eating, self-harm, panic attacks, burnout and thoughts of suicide (Ribeiro et al. 2018; Pascoe et al. 2020).

Problem based learning and mental health

Students in a problem-based learning (PBL) track reported less perceived distress (defined as depression, somatic complaints, hostility, and anxiety) than students in a traditional track with high-stakes quiz and essay based assessment.

 (Moore-West cited in Slavin et al. 2014 p.574)

As yet there is relatively little research on the effect of assessment practices on the mental health of students in UK higher education. Only one recent study by Jones et al (2020) undertook consultations with staff and students at six UK universities to examine the tensions that arise in a whole university approach to assessment, which involved balancing assessment design and practices with student wellbeing and mental health. Student and staff participants of this study underscored that 'traditional' assessment such as examinations and essay assignments, were largely inappropriate for individual student needs, consequently increasing stress within a high-stakes assessment environment. Traditional examinations, especially multiple-choice question examinations, were perceived to be pedagogically ineffective and inhibitive by providing an inaccurate and unfair reflection of content understanding, and therefore unnecessarily stressful. The environment and timing of traditional assessment was perceived to be especially anxiety-inducing, as closed-book and time-restricted examination conditions 'puts a lot of pressure on people', as did bunching of assessment into short periods of time at the end of the academic year. More individualised, innovative and authentic assessment types were perceived by students to support integrative 'holistic learning' and 'transitional skills' to 'apply knowledge in the real-world context'. However, some students and staff noted that unfamiliarity with new assessment types can increase stress and anxiety around performance expectations and grading criteria.

The findings from the Jones et al (2020) study aligns with a recent 2020 Cambridge student-staff partnership project which focused on the impact of assessment practices on students with declared mental health conditions. This project was one of a number of small qualitative research studies, coordinated by the Cambridge Centre for Teaching and Learning in response to the University's requirement to report to the Office for Students on our *Access and Participation Plan*, to investigate the reasons for our awarding gaps (the APP PAR Project 2020). This particular project examined how the burden for initiating and organising the process for 'adjusted modes of assessment' (AMAs), fell on disabled students. A survey was sent out to undergraduate students registered with the DRC and had 127 respondents. It found that the majority of students thought that examinations in Cambridge have negatively affected their mental health and thereby their academic performance.

Reflecting on their experiences, many respondents in the Cambridge study noted that they are 'handicapped' and 'structurally disadvantaged' by exams as their disabilities are of such a nature that they will never be able to compete on a level playing field with non-disabled peers in this format. The provision of alternatives to exams on all courses was strongly supported as a solution to this problem. More than half indicated that they would choose non-exam based assessment over exams, were they given the choice by their Faculty, believing that this would have a positive impact on their mental health. Overall, disabled students were enthusiastic about the possibility for diversified assessment practices, indicating their belief would be better for their education, their ability to show off their knowledge, and their employability and ease of transitioning into employment after study.

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Grading schemes and mental health

A multi-institutional study involving seven U.S. medical schools found higher levels of stress, emotional exhaustion, and depersonalization in schools that used grading schemes with three or more levels, compared with schools that used pass/fail grading. Changing from norm-referenced hierarchal grading to a criterion-referenced pass or fail system has been associated with significant reductions in stress and anxiety among medical students.

(Slavin et al. 2014)

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8. Conclusion: why diversify assessment?

Diversifying assessment is just one of many potential solutions to the tensions between assessment and differential outcomes for students with protected characteristics, such as race or disability. A focus on implicit bias in the choice of assessment topics and marking practices would potentially address racial discrimination. Other initiatives to address the impact of assessment on mental health would include the balancing the timing of assessment so as not to create short periods of high stress, with clearer processes to seek adjustments to both conditions and mode of assessment for disabled students. Lingering questions of student 'deficit' would be addressed by more inclusive approaches to assessment design, greater transparency around assessment expectations and marking practices, as well as clarity about the alignment of formative and summative assessment tasks with learning outcomes.

Over a decade ago, before the statistical data on awarding gaps was available to reveal undeniable patterns of differential outcomes for particular student groups within particular courses and years of study, Hockings reviewed what was already known about the most effective ways to address differential outcomes:

Varying the forms of assessment and methods of teaching was seen to benefit all students, not just those from particular target groups. However, the reviewers found little evidence in the literature of universities adapting their assessment methods to cater for the diverse educational backgrounds of their students. Much of the literature showed the emphasis on students adapting to learning at university rather than universities adapting to cater for the diverse educational backgrounds of their students. (Hockings 2010, p.21)

The diversity that exists within the student population and across the disciplines means that attempts to resolve the tensions between awarding gaps and assessment will require a sustained and detailed analysis of assessment design and practices within individual Department or course contexts. To that end, rather than encouraging isolated pockets of diversified assessment in single papers, Departments and course coordinators are encouraged to undertake a deeper dive into the awarding gaps experienced by their students through a whole-of-course review their assessment practices.

Recognising the interest in some parts of the University to retain elements of the remote/online examination offered during the pandemic, the approach to awarding gaps encompasses diversification of either conditions or methods of assessment, depending on disciplinary contexts and course structures. This means that two intertwined strands of work will be encouraged across the University: one that pays attention to diversifying the *conditions* of assessment (for instance, online and open book, following lessons learned during the pandemic) as well as the *modes* of assessment (reconsidering opportunities for non-exam based assessment tasks). Both strands of work aim to ensure that individual assessment tasks are carefully aligned to the stated learning outcomes and teaching methods of the course, so that a student's achievement in the assessment task demonstrates achievement of specific learning outcomes. This could be achieved in individual papers, part of a Tripos or across the whole programme, but should be supported by a curriculum review or mapping of assessment strategies aligned to course or paper learning outcomes or graduate attributes.

References

APP PAR Project Report (2020) An investigation of educational issues related to the attainment gaps of targeted student cohorts, prepared by Ruth Walker, CCTL as part of the University's *APP Research Papers 2020* submission to the Office for Students, Available online at: https://www.cao.cam.ac.uk/admissions-research/app-research-papers-2020

Biggs J & Tang C (2011) *Teaching for Quality Learning at University*, Maidenhead, UK Open University Press

Bloxham S & Boyd P (2007) Developing Effective Assessment in Higher Education: A Practical Guide New York, NY: McGraw-Hill International.

Boud D & Falchikov N (2007) Rethinking Assessment in Higher Education: Learning for Longer Term, Abingdon, UK: Routledge.

Cureton D & Gravestock P (2018) Supporting students' learning: the power of student-teacher relationships, in *Achieving Equity and Quality in Higher Education,* eds. M. Shah and J. McKay, Palgrave McMillan, Cham Switzerland, pp.51-72

Cousin G & Cureton D (2012) *Disparities in Student Attainment,* York: Higher Education Academy

Devlin M & McKay J (2018) Facilitating the success of students from low SES backgrounds, in *Achieving Equity and Quality in Higher Education,* eds. M Shah and J McKay, Palgrave McMillan, Cham Switzerland, pp.73-95

Education Services (2020) *Future of Assessment* paper endorsed by the Examinations and Assessment Committee, University of Cambridge 25 November 2020 (No: EAC2009)

Equality and Human Rights Commission EHRC (2019) *Tackling Racial Harassment: Universities Challenged.* Available online: https://www.equalityhumanrights.com/sites/default/files/tackling-racial-harassment-universities-challenged.pdf

Hockings C (2010) I*nclusive Teaching and Learning in Higher Education: A Synthesis of Research, Plymouth University*, Higher Education Academy. Available online at: https://www.plymouth.ac.uk/uploads/production/document/path/2/2735/Inclusive_teaching_and_learning_in_HEsynthesis_.pdf

Jones E, Priestley M, Brewster L, Wilbraham SJ, Hughes G and Spanner L (2020) Student wellbeing and assessment in higher education: the balancing act, *Assessment & Evaluation in Higher Education,* DOI: 10.1080/02602938.2020.1782344

Kotter TJ, Wagner L, Bruheim E & Voltmer (2017) Perceived medical school stress of undergraduate medical students predicts academic performance: An observational study, BMC *Medical Education* 17 (1): 256. doi: 10.1186/s12909-017-1091-0.

Leathwood C (2005) Assessment policy and practice in higher education: Purpose, standards and equity, *Assessment & Evaluation in Higher Education,* 30(3), pp 307-24

McArthur J (2018) Assessment for Social Justice: Perspectives and Practices within Higher Education, Bloomsbury, London.

Montenegro E & Jankowski NA (2017) *Equity and Assessment: Moving towards Culturally Responsive Assessment*. National Institute for Learning Outcomes Assessment. Available online: https://files.eric.ed.gov/fulltext/ED574461.pdf

Mountford-Zimdars A, Sabri D, Moore J, Sanders J, Jones S and Higham L (2015) *Causes of Difference in Student Outcomes,* Report to HEFCE by Kings College London, ARC Network and the University of Manchester. Available online at: https://www.escholar.manchester.ac.uk/uk-ac-man-scw:289357

Pascoe M, Hetrick S and Parker A (2020) The Impact of stress on students in secondary school and higher education. *International Journal of Adolescence and Youth* 25 (1): 104–112. doi:10.1080/02673843.2019.1596823.

Price M, Rust C, O'Donavan B, Handley K & Bryant R (2012). *Assessment Literacy: The Foundation for Improving Student Learning*. Wheatley: Oxford Brookes University.

RAFA2 (2020) *Re-imagining Attainment for All 2*, University of Wolverhampton and the Office for Students' (OfS) Addressing Barriers to Student Success (ABSS) Project. Available online: https://rafa2.org/homepage/

Ribeiro I, Pereira R, Freire, I, de Oliveira B, Casotti C, Boery E (2018) Stress and quality of life among university students: A systematic literature. *Health Professions Education* 4 (2): 70–77. doi:10.1016/j.hpe. 2017.03.002.

Sambell K, McDowell L & Montgomery C (2013) *Assessment for Learning in Higher Education*, London and New York: Routledge.

Slavin SJ, Schindler DL & Chibnall JT (2014) Medical student mental health 3.0: Improving student wellness through curricular changes." *Academic Medicine: Journal of the Association of American Medical Colleges* 89 (4): 573–577. doi:10.1097/ACM.0000000000000166.

UUK & NUS (2019) *Closing the Gap: Black, Asian and Minority Ethnic Student Attainment at UK Universities*, Universities UK and National Union of Students. Available online: https://www.universitiesuk.ac.uk/policy-and-analysis/reports/Pages/bame-student-attainment-uk-universities-closing-the-gap.aspx

UUK QAA (2018) *Assessment: Advice and Guidance*, UK Quality Code for Higher Education, Quality Assurance Agency for Higher Education. Available online: https://www.qaa.ac.uk/quality-code/advice-and-guidance/assessment