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Assessment and Feedback in a Post-Pandemic Era: A Time for Learning and Inclusion

Patrick Baughan

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Editor's note and acknowledgements

Patrick Baughan, Advance HE

Assessment and Feedback in a Post-Pandemic Era: A Time for Learning and Inclusion is a major new publication from Advance HE, addressing significant and timely issues in assessment in higher education. I am delighted to have edited this volume, working with more than 40 colleagues across the sector to produce a volume that seeks to account for the wider environment in which we all now live and work.

The publication has its origins in a symposium of a similar name, held online in October 2020, and chaired by Dr Erica Morris and me. This symposium brought together speakers and facilitators who addressed assessment issues in the 'pandemic environment'. The event began with a keynote by Dr Edd Pitt on *The impact of Covid-19 on assessment and feedback practice: from the emergency phase to the preparation phase and beyond.* Edd Pitt has built on this keynote in both his guest introduction to this publication and in a paper co-authored with Professor Kathleen Quinlan. Indeed, their paper draws us to the heart of what the publication is about: the implications and impacts of the Covid-19 pandemic on assessment and feedback, and the necessary changes that staff have had to make as a result to their assessment and feedback practices.

As we have learned, the pandemic has been long-lasting, its impact on higher education has been tremendous, and its effect on how we assess and provide feedback to our learners will, in many cases, be permanent. It is hoped that some of the resulting changes we have introduced to our assessment and feedback processes, discussed in a number of the following papers, will be positive in the longer-term.

I would like to take this opportunity to thank everyone involved in this substantial body of work. I am delighted that the contributors include such an exciting range of authors, from international experts in the field to colleagues researching and writing about assessment and feedback for the first time. This is a work that foregrounds issues of diversity and inclusion, and I hope we have been successful in applying these themes to both the content and authorship of the papers. I would also like to thank those colleagues who have been involved in the development and production of the publication, many of whom have been asked to 'get things done' at some speed. In particular, I benefited from the help of two associate editors who offered considerable support in reviewing papers and providing advice throughout the time that the publication was put together: special thanks to Jess Moody and Erica Morris.

Although the title of the work was confirmed quickly, there were some discussions as to whether we should use the term 'post-pandemic'. Can it be assumed that we are actually 'post-pandemic'? At the time and place of my writing of the introduction (London, June 2021), restrictions are being eased, but that may change and many readers will be based in places where the trajectory of the pandemic is different. We are not yet 'post-pandemic', but I wanted the title to convey some sense of optimism and future thinking. As a result, the title is slightly different from that of the symposium which preceded it.

A second major emphasis of the work is that of equality, diversity and inclusion (EDI). All our assessment and feedback practices need to account for and apply EDI principles, but the way we do this has required review in light of the pandemic. That is, the pandemic has not only reminded us of the importance of EDI issues but has raised new issues too. These points form the focus of several of the papers that follow, but all the papers in some way consider EDI matters.

There are 19 papers in this publication, which have been organised under three sections: (a) assessment and academic standards in the post-pandemic landscape; (b) inclusivity and assessment; (c) assessment and sustainability. The final section (c) comprises two papers, which each address assessment and feedback in connection with another issue of importance to society at large, and to higher education specifically: sustainability and education for sustainable development (ESD). It is pleasing to have ESD considered here, since 2021 also saw the publication of the second edition of the *Education for Sustainable Development Guidance* (QAA and Advance HE, 2021).

Finally, this work represents a companion piece to an earlier one on feedback in the sector, entitled *On Your Marks: Learner-focused Feedback Practices and Feedback Literacy* (Baughan, 2020). If you haven't seen this already, I encourage you to take a look. The details and web link can be found below. And to quote from the introduction of that publication: I hope that the papers that follow here will be useful to all of you, whether you are a staff member, a student, or simply a curious reader. Please feel free to contact me if you have any comments or ideas for follow-up work – and thank you for your interest.

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QAA and Advance HE (2021) *'Education for Sustainable Development Guidance'.* Gloucester: QAA; and York: Advance HE. Available at: www.advance-he.ac.uk/knowledge-hub/education-sustainable-development-guidance [accessed 16 June 2021].

Introduction: assessment and feedback in a post-pandemic era

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The papers in this publication come in part from the Advance HE Assessment and Feedback Symposium held in October 2020. The focus was on assessment and feedback in the pandemic era: a time for learning and inclusion. The work of those who presented, and others subsequently invited to contribute to this publication, represent a unique moment in our lifetime. Much of the work reported here took place at a time of great uncertainty, challenge and adversity. It is a testament to the resilient and resolute nature of higher education (HE) and all employed within it, that this work was carried out, analysed, reflected on and produced for this publication. In this introduction I want to provide some insight into not only the arguments I put forward in my keynote for the event but also the findings, reflections and future-focused thoughts of the other contributors.

In the keynote for the event, I discussed how the events of March 2020 changed HE for us all. It was a rapid, challenging and at times rather scary experience for those involved. I focused on the ways in which the sector responded to the move to largely online learning in HE. This rapid switch to more online forms of practice had far-reaching implications for educators as they had to negotiate logistical, quality assurance and practical assessment and feedback issues. In the second part of the keynote, I reported on how the sector was responding to the challenge of planning for autumn 2020 delivery – from September 2020. Because of their experiences from the first lockdown, educators were, for example, thinking differently about how they could help students develop at a distance. At the end of the keynote, I discussed more long-term considerations of what opportunities online assessment and feedback might provide for both educators and students. Taking this further, I am delighted that the collection of articles within this publication has shone a light on many different practices that were occurring during this period. There are examples from across the world which broadly discuss two main areas for the sector to consider in the post-pandemic era. Firstly, I will draw your attention to contributors who focus on assessment and academic standards in the post-pandemic landscape. Secondly, the areas of inclusivity and assessment and their long-term sustainability are explored.

Assessment and academic standards in the post-pandemic landscape

Kay Sambell and Sally Brown have had quite an impact on numerous practitioners during this period. Their work on assessment has helped many people navigate the tricky path of rapidly switching to more online forms of assessment. Their collection of very helpful guidance publications has featured and been shared frequently in many conversations within professional networks. This constantly evolving body of work has a consistent theme running through it of questioning the status quo of assessment prior to the pandemic. In their article in this publication, they set out a logical and well-conceived argument relating to changing assessment for good in the post-pandemic era.

Sambell and Brown argue that universities right now have a golden opportunity to make positive and lasting changes to assessment. The pandemic has brought about widespread rapid change, the like of which we were always told could never be achieved. Now, I am not saying everything has gone swimmingly and, certainly, doing this during such a turbulent and difficult period was not ideal, but as Sambell and Brown argue, it is a proof of concept. In essence we have shown that change can be achieved and now our focus should probably switch towards considering how we might make this a lasting one that strikes the right balance between what is possible for practitioners and what has the most impact on our learners.

Others in this publication have attempted to initiate institutional assessment change. Elkington charts how at his institution this process continued during the pandemic. The notion of flexible assessment is considered and argued for. It appears that, for Elkington's institution, the pandemic provided the site for a roll out of increased assessment flexibility. What this case study demonstrates is the challenges this kind of change presents. Expedited approval processes, review boards tasked with ensuring viability of alternative assessments and quality assurance concerns were all major challenges during this period. Both Elkington and Sambell and Brown discuss examinations. Their critiques highlight how prevalent and pervasive exams have been within HE, but is it time now for us to question whether they are still the 'go to' assessment? Like Sambell and Brown, Elkington highlights the need for us to consider whether this assessment offers, for instance, demonstrable value for enabling learning, such as formative (assessment-for-learning) processes. Further, we are also told by external market drivers that they want graduates who are ready for the world of work, so do examinations tell us about the key skills graduates need for work? Their argument draws me to think of the parallels with a recent article by Dawson, Carless and Lee (2021), who question how much HE feedback practices fail to mirror those one might expect to experience in the authentic and real-world setting of graduate employment. It seems, therefore, we are moving towards a period of deep reflection about whether HE assessment and feedback is fit for purpose as we navigate the new dawn of a post-pandemic era.

The pandemic period also brought about no detriment policies in many HE institutions. In my keynote I discussed how 83% of respondents to my survey said their university had operated one. The adoption of such a policy was to ensure that no student was academically disadvantaged by the situation, including the alternative teaching and assessment arrangements. In their paper, Rust, O'Donavan and Price consider some of the issues and frictions which feature in both maintaining academic standards and being fair to students during this period. While supportive of the use of no detriment policies as they increased flexibility for extensions and appreciating students' individual circumstances, they rightly highlight that there may be implications further down the road for such approaches unless we consider maintenance of standards. They are concerned about how the sector navigated the difficult area of student achievement. Practices of scaling marks at module level against the performance of previous cohorts, reducing word counts or dropping the number of assessments, they argue, may not have had any benefit for the student in the long term. At the forefront of their paper is the need for the sector to be seen to be upholding standards. It seems very prudent to make this cautionary observation; we want students who have experienced these changes to leave university with the knowledge their outcome stacks up against other students who achieved prior to and after the

pandemic. It strikes me we have a duty to uphold and defend the reputation of higher education. We have already seen much coverage in the media about the perception of grade inflation and hostility towards more students doing well. We are at a junction with public opinion, there are many debates about how worthwhile university is for students; dare I say – is it value for money? All these opinions and perceptions make it even more crucial that we reflect on the way we have collectively navigated the thorny issue of standards and achievement. As Rust et al conclude, it could be that the pandemic has offered us a chance to interrogate inwardly our assessment and quality practices.

Assessment inclusivity and its long-term sustainability

Take-home exams were an approach and response many institutions chose in the immediacy of the shift to online in the first wave of the pandemic. At Heriot Watt University, Buckley et al considered the impact this assessment method had at their institution. Although named an exam, Buckley et al argue that the takeaway nature meant application of knowledge was more at the forefront alongside students perceiving them as resembling more of a real-world setting. However, this assessment presented some issues in terms of student interpretation of required effort deployment. Many students reported spending more than six hours on one take-home exam which lecturers had designed to be completed in less than three. Such findings suggest that while moving traditional examinations to take home examinations was necessitated by the pandemic, we need to consider how this can work in a post-pandemic era. Issues of accessibility, inclusivity and fairness are greatly important for us to consider if we are to instigate changes to the nature and form of the examination in the post-pandemic era.

A potential criticism that could be levelled against our response to the pandemic was that many assessment switches had the potential to unearth inclusivity and sustainability issues. Arefi highlights the difficulties oral-based assessment posed for UK students with speech impediments and international students. More broadly, this work not only discusses how we should all be mindful within our assessment design if our students are international and have learning disabilities, but also be mindful of the needs of all students. Swann et al discuss BAME and white students' pre-assessment support preferences. Although this work was carried out pre-pandemic, the results suggest some differences in potential uptake of opportunities for dialogue with educators. Remote support strategies seemed to help provide universally accessible support options. From an accessibility perspective, students desired accessible and flexible support, which has potential to reduce barriers to access in the post-pandemic era. Opportunities, access and inclusivity were also discussed by Manoharan who highlights the need for us to reconsider how our curricula might promote chances for students to transition into graduate opportunities. Manoharan argues that, as things stand, there simply are not enough places or opportunities embedded within programmes, especially for students from nontraditional or disadvantaged contexts. The over reliance within the sector on extracurricular or regional-specific opportunities has been exposed during the pandemic. As we navigate the path out of this, it is apparent that a closer relationship between industry, the university and the curriculum is needed in order to help all students become graduate ready for the labour market.

Padden and O'Neill discuss inclusive assessment design in light of equity issues that surfaced in Ireland following the move to online learning. Like Elkington the authors explain the challenges of introducing institutional change. Shifting the conversation to equity and inclusion, Padden and O'Neill consider how buy-in from all corners of the institution are vital to its success. This has been expedited by the pandemic and successful initiatives, such as using VLE-based solutions to support visually impaired students online. Across the sector many different groups within universities have come together in the pursuit of change and, to a certain degree, survival. However, the key question now is how this change can be leveraged to progress the inclusion agenda forward in the post-pandemic era. Some areas of equity that have come to the fore are access to good speed internet, safe spaces to work and the distrust of students' academic integrity. Padden and O'Neill make the point that making changes to assessment during the pandemic has also unearthed the lack of discussion between colleagues, lack of consultation with students and increases to workload for all involved. The sustainability of these changes in the post-pandemic era seems to be of utmost concern for us to address. Like many of the authors I have alluded to thus far in this introduction, the flavour of these papers all suggest we should, if we can, move forward with the things that have worked well but be reflexive about those that have exposed areas for improvement. This is especially the case with meeting the needs of all our students, some of whom have perhaps found the last 18 months especially difficult from an inclusion and equity perspective.

Reference

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Part A:
Assessment and academic standards in the post-pandemic landscape

Changing assessment for good: building on the emergency switch to promote future-oriented assessment and feedback designs

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Abstract

During the pandemic, to manage the difficulties produced by the shutdown of campuses, many universities initially responded by cancelling significant numbers of formal exams, reducing the volume of summative assessment and finding, often at speed, alternative ways of ensuring that learning outcomes had been met. This paper suggests that universities now have a vital opportunity to make positive long-term changes to assessment as a result of the rapid alterations many made due to campus closures during the pandemic. We now have a once-in-a-generation opportunity to reimagine assessment for good, rather than simply returning to the status quo. One way of supporting this change, we argue, is to reconceptualise assessment and feedback practices by adopting future-oriented design principles.

Introduction

For decades, assessment scholars have mounted a consistent and convincing, evidence-based case for a radical revisioning of assessment in higher education (Brown and Knight, 1994; Brown, Bull and Pendlebury, 1997; Carless, 2007; Boud et al, 2010). The educational ideal is to integrate assessment and learning processes more seamlessly (Sambell et al 2013) so that assessment and feedback practices become more fit-for-purpose and beneficial to students, not just within the academy but also in their longer-term lives post-graduation. 'Sustainable assessment' (Boud and Soler, 2016) has been proposed as an idea that focuses on the ways in which assessment can contribute to learning well beyond the timescale of a given course. It prepares learners to meet their own future learning needs while also meeting the needs of the present and the immediate future by helping students to meet the demands of specific formative and summative assessment tasks.

Building on our web-based Covid-19 assessment collection (Sambell and Brown, 2020) here we particularly highlight two practical strategies for designing future-oriented assessment and feedback practices. Both the approaches for which we argue are underpinned by two fundamental questions we consider useful to think about in any redesign process:

1. How can we ensure that assessment tasks are future focused?
2. How can we ensure that our feedback processes are future focused?

We have chosen to focus specifically on highlighting our selected inter-related design approaches, though, because they represent areas for *manageable* change. In other words, the emphasis of our work, given the current context, is on striking a pragmatic balance between 'the art of the possible' for busy practitioners (who have been required to make changes to assessment practice at very great speed while working in extremely challenging circumstances) and a positive commitment to the educational ideal. This is important because now, perhaps, more than ever before, with colleagues at all levels within higher education working beyond their normal comfort zones in pandemic times, we are acutely aware of the impact of assessment on the wellbeing of staff and students alike. Issues of manageability, fairness, justice, inclusivity and compassionate assessment have rightly become vital considerations. With this in mind, then, we focus here on two examples of practical steps to make assessment and feedback processes more future-oriented and sustainable.

Background context: the Covid Assessment Collection

The papers within our Covid Assessment Collection sought, from spring 2020 onwards, to respond incrementally to the major interruption to routine assessment custom and practice, when a dramatic hiatus in university and college assessment occurred globally, caused by the closing of campuses due to the Covid-19 pandemic, triggering major change because students could not attend on site. The whole collection (Sambell and Brown, 2020), which is still evolving and growing, can be here. Initial and immediate responses to the urgent need for alternatives was followed by a paper published on 21 August 2020 which outlines the different phases of our work and the ways in which we sought to respond to requests to support beleaguered colleagues with the emergent Covid-19 situation's ongoing impact on university assessment. This paper explicitly recognised that, as the sector began to move into longer-term thinking, we had an opportunity to focus less on managing damaged administrative processes in a time of crisis and more on having a radical and aspirational vision of what assessment and feedback processes can and should be like if they are to play a major role in supporting and extending students' future learning, as well as measuring that learning outcomes have been met. Future-facing assessment and feedback processes lie at the heart of the assessment for learning (AfL) movement in higher education (Sambell et al, 2013; McLean, 2018). Four decades of research and innumerable funded and unfunded projects, (eg UK Centres for Excellence in Teaching and Learning, National Teaching Fellowship funded awards, Higher Education Academy projects, Staff and Educational Development Association (SEDA) Small Grants and institutional projects of all kinds) exploring how to improve assessment strongly suggest that it should be unthinkable for assessment to do other than be focused centrally on improving student learning.

In what follows, we now turn to champion the value of designing more authentic assessment tasks and the value of developmental formal and informal feedback designs that are embedded into learning and teaching opportunities, rather than primarily associated with summative commenting practices. Designing in opportunities (prior to summative assessment) which support, engage and position students as agents of their own learning in a scaffolded way enables students to perceive where their work doesn't match up to standards required, but also to understand what they would have to do to

improve future performances in this and related domains, and to develop vital self-regulatory capabilities. In each instance we emphasise the importance and educational viability of seeking as far as possible to focus our design thinking on future impact.

How can we ensure that assessment tasks are future focused?

Towards authentic assessment task design

The prevalence of traditional unseen, time-constrained and invigilated on-site exams, which caused such problems in the online switch, has long been critiqued for its lack of authenticity and relevance to students' future lives, the challenges it presents to inclusivity and the deleterious impact on students' approaches to learning (Brown and Knight, 1994, Sambell et al, 1997, Gibbs and Simpson, 2005). Unless designed and embedded as part of a carefully planned process, they "tend to measure lower order thinking skills in a decontextualised manner" (Villarroel et al, 2020, 38) and foster surface approaches to learning, encouraging students to remember knowledge rather than engage meaningfully with it. By contrast, assessment tasks perceived by students as somehow more 'real' or 'authentic' have integral value in themselves and can change the orientation of learners when approaching assessment significantly. This is why authenticity is so important to nurture as a central feature of our overall assessment designs, and why we should think seriously about cutting back on traditional time-constrained exams.

Authentic assessment is often viewed as being synonymous with future employability. For instance, Villarroel et al (2018) argue:

> "Authenticity has been identified as a key characteristic of assessment design which promotes learning. Authentic assessment aims to replicate the tasks and performance standards typically found in the world of work and has been found to have a positive impact on student learning, solve problems skills, autonomy, motivation, self-regulation and metacognition, abilities highly related with employability."

But authenticity can involve much more than replicating the skills required in the world of work, which, after all, is, in many instances likely to change radically and unpredictably in future. Real world relevance might also reflect authentic learning and the ways in which knowledge is created in the discipline and fuel a student's sense of growing participation in the subject-community by learning to think and practise, say, like an historian, or an engineer (Meyer and Land, 2005). Davison's (2011) research on the link between authentic assessment and autonomy found that students on non-vocational programmes identified authentic assessment with personal issues that they had identified for themselves, or which offered a sense of choice, or involvement in social communities characterised by social interaction rather than isolation. If they are to become agents for change in their own lives and beyond, students need assessment which involves cognitive challenge, development of metacognitive capabilities, shaping of identity, building of confidence and supports a growth towards active citizenship.

Authenticity may also resonate with possible selves (Henderson et al, 2018), supporting a student to engage with new ways of thinking about who they may wish to become in future. Hence, we are keen to develop and value assessment practices that are transformative, and which stimulate student engagement, both now and in the longer term.

> "This entails redesigning assessment practices to foster individual engagement in learning activities and subject matter, but also involves the development of assessment practices whereby students learn via participation and the development of identity."
>
> *(Sambell, Brown and Race, 2019)*

A practical response: designing better assignments

Our paper of 1 June 2020 argued that some of the alternatives that universities have put in place for the coronavirus contingency should be made permanent, and that we should use this as an opportunity to make some radical and substantial reconfigurations to assessment in the future to make it more authentic. A particular feature of this paper was the **comparison table** where we explored the pros and cons of diverse assessments that can be done virtually. While many of the tried-and-tested options (such as in-tray-exercises, vivas, patchwork assessment, podcasts, blogs, and rough guides) offer huge benefits, it's important to recognise that it can be hard work to create, embed and pilot new assignments from scratch that are authentic, challenging and engaging for students. So, on 17 August 2020 our subsequent paper 'Writing Better Assignments…Approaches to Good Task Design' sought to make the job less daunting by breaking down the task into its component elements. A full version can be accessed from our Covid Assessment Collection site, and later papers offer illustrative worked exemplars from a range of disciplines, but in short, our approach argues we should start with the specified **learning outcomes**, looking for the **powerful verbs** contained therein which then provides cues about the activities we should ask students to undertake in their assignments by supplying the **object** for the verb. Next we can provide an indication of what **outcome/ evidence of achievement** is needed to demonstrate that the learning outcomes have been achieved, then we can wrap this up within a clear and relatable context for the task, probably in the form of a scenario or case study, and supply some **modifying 'range statements'** indicating what this might look like in practice. The indicative examples below show how this can work in practice.

Figure 1: Designing more authentic assessment tasks

Verb/ educational outcome	What? ie object	Outcome/evidence of achievement	Modifiers/ developments/ range statements
Interpret	Complex and sometimes incomplete or conflicting data	Compile a summary meaningful for experts and laypersons	Leading to a viable action plan for a team to implement
Review	Data from a variety of sources	Produce an executive summary	For a specific audience of employers
Set up	Specialised equipment appropriately	Draw up a 'quick guide' for peers	To enable them to use it safely and appropriately
Evaluate	Three proposed solutions to a problem	Propose a further two of your own	With suggestions about what might work best
Compile	Contingency plans for a professional environment	Produce disaster recovery in case of a serious emergency	Leading to mitigations and remediation

In following years, the scenarios or tasks can be modified, but the structure of the assignment can remain broadly the same, so in this way it is possible to design practical authentic assessments in a way that is manageable and contributes to learning. Our paper of 19 March 2021 in the Covid Assessment Collection provides 16 worked examples from diverse disciplines of this approach, and more are being progressively added.

How can we ensure that feedback practices are future-focused?

Involving students actively in feedback processes

When we think about feedback in higher education, we routinely think about comments that lecturers provide to students about their work. This emphasis on the provision of inert information has a number of limitations. It presents workload pressures, because the economies of scale afforded by teaching sizeable classes are not matched when it comes to marking work and providing comments for large numbers (Gibbs 2010, 8), particularly when cohort sizes have grown over the years with no adjustments for assessor deployment. Feedback then often comes too late to enable students to improve their performance, especially if students fail to see the relevance of comments for work they may do in future. Laurillard (2013) makes a useful distinction between 'extrinsic' feedback (constituting a commentary subsequent to the action) and 'intrinsic' feedback (which takes place within the context of the action). It stands to reason that the latter seems more valuable in terms of enabling change and influencing future action. However, often feedback sheets are associated with the summative assessment, where they become deleteriously entangled with the summary judgement (and defending the mark or grade) and hence positioned mainly in a measurement rather than a learning paradigm, looking back to what was done well or less well, rather than forward to future work.

But research has also found that feedback in this format is difficult for students to comprehend, however forward-looking teacher comments may aim to be, as, put simply, students learn very little from simply being told. To become more learning-focused, students need to become more actively involved in 'meaning-making' on the basis of interactions with educators and peers, and [hone] their own evaluative judgment'…. so "teachers need to design curricula and assessment in ways that enable students to gain experience in making judgments and using feedback" (Winstone and Carless 2019, 12).

Interestingly, according to Nicol (2020) this does not always mean that improving feedback processes to guide learning necessarily has to rely on providing more timely, more targeted or more detailed instructor comments. Instead, Nicol argues, we can productively activate students' 'inner feedback' by designing opportunities that harness student-comparison-making, which he sees as a "natural, ongoing, pervasive and cyclical process that underpins learning" (Nicol, 2021).

"Internal feedback is the new knowledge that students generate when they **compare** their *current knowledge/competence against some reference information*" (Nicol, 2020, 2), and it can be unlocked by curriculum designs that enable students to make deliberate comparisons of their work against information from a range of sources other than comments, and to make the outputs of their comparisons explicit in writing, discussion or action. Comparators may include, for example, a textbook explanation, videos of an expert performing something, or criteria, as well as others' comments. Early empirical work has indicated that making the process of comparison-making explicit helped students improve their learning outcomes in the short-term future, but also helped them develop their self-regulatory capacity for the longer-term (Nicol and Selvaretnum, 2020).

The following illustrative example briefly outlines a practical response by one of the authors to enhancing feedback processes in the context of the rapid switch to emergency remote teaching in pandemic times. The case study, based on developing first-year students' learning by activating inner feedback in Childhood Studies at the University of Sunderland, is based on an in-progress action research project led by Linda Graham and Kay Sambell.

A practical response: focusing on activating and supporting students' inner feedback

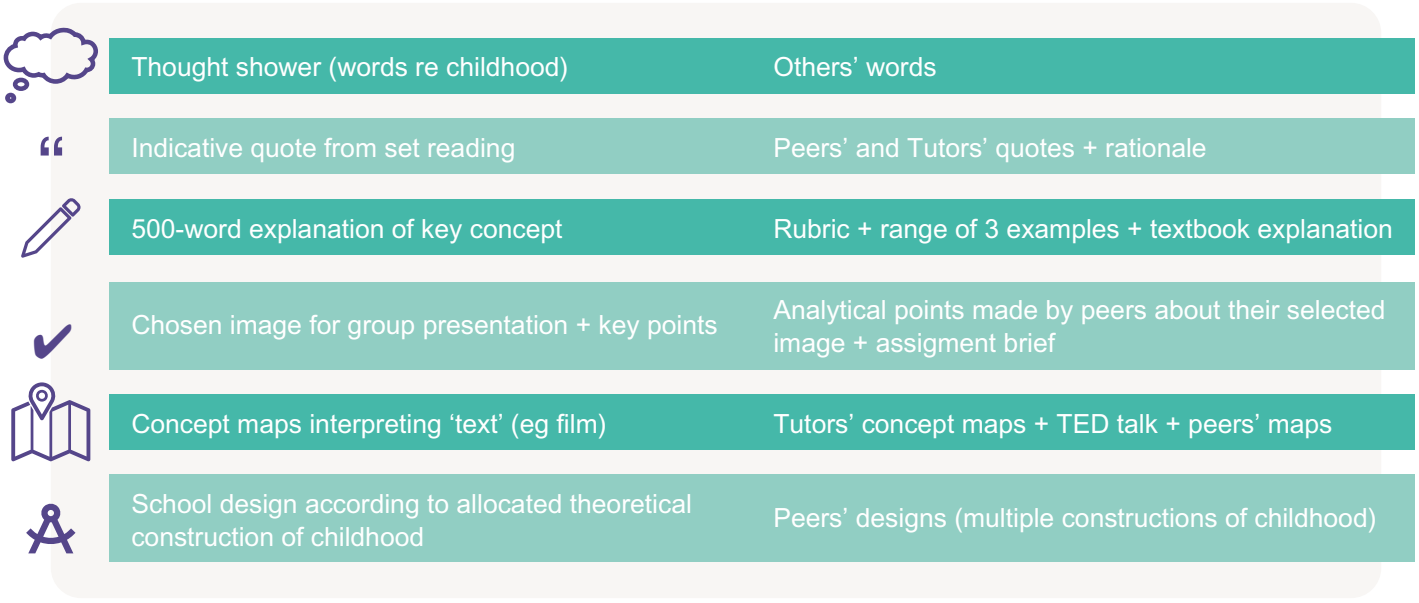
The semester-long module 'The Nature and Culture of Childhood', substantially recruiting students from diverse backgrounds, was rapidly redesigned for remote delivery by incorporating the three steps of Nicol's suggested sequence on a weekly basis. Comparative reference information and associated activities were overtly threaded throughout the module as the basis for student interaction and activity in synchronous weekly online seminars and with the asynchronous materials on the virtual learning environment. The latter were designed according to an Instructional Design approach which was adopted university-wide, but also systematically built in weekly opportunities based upon Nicol's approach.

Each week students followed an iterative sequence of Produce, Compare, Review steps.

1. **Produce.** Here students engaged in a learning task before they made the planned comparisons. This was a vital design step as it enabled them to form a focal mental representation against which to make their comparisons and gave them a sense of which aspects they found easy, challenging and so on. In the early stages of the module the tasks were very small-scale and were incorporated directly within synchronous online seminars, where they were wrapped round with dialogue (using chat and via mics, for instance), but later activities also became embedded in the asynchronous online VLE interactive 'lecture' materials.
2. **Compare.** Each week teachers selected or constructed and made available suitable reference information for comparison. Every week reference materials which were analogous to what the students were asked to produce were provided, and these were often accompanied by analytical comparisons (dialogue, criteria, comments which the students were advised to also use in their comparison-making activities).
3. **Review.** This was the final step in the sequence each week, intended to encourage students to engage purposefully in the comparison process at a deep level by rendering the results of their comparison-making explicit. Teacher dialogue scaffolded and mediated the comparison-making activities (eg by asking questions; or inviting students to look for positives and negatives; or noting how their own response was similar or different in a particular way). Students were encouraged during time set aside at the end of each synchronous session to summarise their learning points in chat or discuss them in breakout groups.

The process of reflective journaling, with learners expounding their developing ideas throughout the module was captured in a specially prepared 'Assessment Workbook', which followed the three-step sequence on a week-by-week basis. While the weekly sequence was carefully designed to steadily help students build relevant knowledge and grapple with the conceptual challenges of a difficult threshold concept in Childhood Studies, and the learning, teaching and assessment activities were constructively aligned overall, the workbook activities were entirely formative (carrying no marks). A low-stakes (30%) summative assessment (group presentation, with individual component) came half-way through the module, and the final assessment (70%) was an individual project. As the module progressed, the comparison-making activities focused increasingly explicitly on supporting students with assessment requirements, standards and expectations. Figure 2 gives a general sense of the types of weekly learning tasks and comparators that gradually developed in complexity and focus.

Figure 2: Indicative student productions with associated comparators



Evaluation

Detailed evaluation is ongoing at the time of writing, but in broad terms the teaching team found the approach an extremely valuable one, especially considering the online switch and their concerns about newly commencing students not having experienced the traditional on-campus opportunities to bond as a cohort. Themes to emerge from initial analysis of the academics' reflective diaries included the timely and manageable nature of the approach (with notably fewer questions being posted on the Frequently Asked Questions (FAQ) board immediately prior to the summative assessment); the responsive nature of the approach (whereby teachers could form a clear sense of the areas students were struggling with and alter accordingly); the respectful and non-threatening nature of the approach (whereby students were challenged to expand their thinking and even their world-view, but not undermined by exposing their 'mistakes'), and the extent to which students were able to develop an explicit sense of what else they might try to improve their learning outcomes and future strategies.

Students commented on a wide range of new insights they had developed, including some which related to deepening knowledge ("Opened my mind to different perspectives"; "Seeing things from others' points of view will make me look deeper when doing research") and improvements for future assessment ("Link my writing to the image a bit more"; ''I've learned how to analyse texts in more detail and present a debate"; "Made me understand more about the assignment and different views"). Students rated the approach highly and positively in surveys, and many commented on the way that the method helped them "get to know each other" and "feel part of a group- even though we couldn't meet on campus"; "liked getting to know other students".

Redesigning the module around inner feedback in order to cope with the online switch, then, brought the welcome 'side-effect' of instilling a sense of community and belonging among first years entering the programme, and was helpful in establishing active and participative approaches to learning from the very outset of their higher education journey. However, as with any innovation, mutual trust and confidence needed to be established over time. Indeed, during the post-hoc interviews a few learners reported that they initially had been disconcerted or even "cross" by "being expected to do work that the teachers weren't going to take in", until these students "saw what we were doing with it and compared it with the three examples…That helped me. I changed the way I was writing it, because of the feedback I got from the way the teachers were talking about everyone's images and scripts in the chat and in the session discussion. I rewrote the script for my [summative] presentation." Guiding learning by activating inner feedback was particularly well-suited to support inclusive and enabling transition pedagogies (Kift, 2015) when commencing learners were navigating a change to the type of study represented by higher education, when learners' ideas about what 'doing university' entails are being formed.

Conclusions

Initially the immediate challenges of the pandemic pivot focused mainly around providing alternative assessments in a time of crisis, aiming at best to offer no worse than what was previously provided, but over the year it became clear that the sometimes-radical shift away from campus-based assessment and in-class support for students could actually provide clear benefits. Assessment tasks had to change once invigilated on-site exams became unviable, but we argue this has had the potential to provide a substantial bonus in a move towards more authentic assessment, bringing many advantages for students. Breaking the traditional cycle of written assignments followed by post hoc feedback to largely passive students can radically change the nature of learning itself, with inner feedback providing a vehicle for self-development, personal growth and a sense of community, with students progressively constructing knowledge paradigms during the process of undertaking and collectively discussing the incremental tasks. This, we propose, offers a manageable route towards future-focused assessment and feedback that can change university assessment for good.

Key takeaways

+ Assessment can be designed to promote, support and extend future learning, not just measure it.
+ We now have an important opportunity to improve assessment in line with the past few decades of scholarly literature, so we must avoid reverting to a heavy reliance on traditional methods post-pandemic.
+ More authentic, future-focused assessment practices and feedback processes help to foster engagement and learning for the longer term, in a broad range of ways.
+ A stepwise design process (which links tasks to the verbs in the learning outcomes; provides a context scenario; specifies the evidence and requirements) offers busy practitioners a manageable way of making assessment tasks more authentic.

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The impact of Covid-19 on assessment and feedback practice: from the emergency phase to the preparation phase and beyond

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Abstract

The period between March 2020 and October 2020 will live long in the memory for those involved in higher education, as they coped with changes in response to the Covid-19 pandemic. This article first analyses UK higher education professionals' assessment and feedback practices in response to what we are calling the emergency phase of March to June 2020. In the second part of the article, we seek to learn how UK educators were reflecting on the lessons from that emergency period to prepare for the 2020/2021 academic year. The article concludes by considering how these two phases may influence assessment and feedback practices in a post-pandemic era.

Introduction

The pandemic that began in early 2020 changed higher education (HE) for everyone involved. For educators, it was rapid, challenging and sometimes daunting to suddenly adapt practices to address an unprecedented situation. In the UK, in what we are calling the emergency phase of March to June 2020, the sector had to modify how assessment and feedback operated to accommodate lockdowns and social distancing through the end of the academic year. These circumstances particularly affected assessments that normally required physical presence, such as exams that would normally have been timed, proctored and closed book, as well as practical exams that normally would have been face-to-face and hands-on. In this study, we wanted to understand and document the effect emergency adaptation had on assessment and feedback. Further, we sought to learn how UK educators were reflecting on the lessons from that emergency period to prepare for the 2020/2021 academic year in which social distancing was still required. We call that the 'preparation' period, in which educators had the UK summer months of July through September to plan for the next academic year. Exploring educators' experiences and their changing approaches to assessment and feedback within different situational constraints and affordances also enables us to consider the potential long-term effects. In this paper, we explore the emergency phase and the preparation phase as they relate to assessment and feedback and consider how they may influence those practices in a post-pandemic era.

Methods

In September 2020, we circulated links to a short online questionnaire via various mailing lists and social media (Staff and Educational Development Association, Principal Fellows HEA and a Jisc mail list for external examiners in the UK).

The survey asked participants about a) if and how they adapted their assessments and the feedback they gave to their university students during the March to June UK national lockdown and b) their plans for the 2020/2021 academic year considering the shift to mainly online learning. The survey consisted of a mix of closed questions with some "yes/no/unsure" and some five-point Likert scale items, as well as several open-ended questions. Questions focused on educators' confidence in making changes and specific questions about potential changes in and influences on a) assessment, assessment design considerations and deadlines; and b) feedback quantity, medium and students' feedback-seeking behaviours. We had responses from 146 academics with a varied level of experience in academia (under 10 years=44, over 10 years=56, over 20 years=46) from different types of institutions (research intensive=68, Teaching intensive=78). Participants were predominantly teaching in the social sciences or humanities (n=108), with science subjects less represented (n=38). Data was analysed descriptively. We also used the related samples Wilcoxon signed rank test to compare responses from the emergency phase to the preparation phase. Ethical approval was gained through the University of Kent.

Results

First, we report on key sector responses to assessment and feedback in the emergency phase. In the second section we focus on the differences between the emergency phase and the preparation phase.

Sector responses to assessment and feedback in the emergency phase

Assessment

Most educators (72%) did not change the number of assessments they required students to complete. Rather, some assessments were modified to replace examinations with coursework. Some (24%) said they decreased the number of assessments students needed to complete. Responses to open-ended survey questions indicated that reductions occurred by combining separate smaller assessments into one larger piece or combining or removing the assessments that would be challenging to deliver at a distance, such as presentations and practical exams. In fact, one of the most commonly cited challenges noted by respondents in the emergency phase was how to handle practical exams. Interestingly, 39% of respondents indicated that they gave students more choice in how they demonstrated their learning, suggesting attention to inclusivity in their modifications.

Most educators extended students' deadlines with 73% agreeing or strongly agreeing; 9% neither agreeing nor disagreeing; and 18% disagreeing or strongly disagreeing. These extensions caused downstream challenges as educators mentioned time as a challenge in this phase, in part because deadlines or time constraints for students were often reduced, which meant shorter turnaround times for marking or more time required to mark longer exam answers.

Participants indicated that, when deciding whether to make changes, they discussed the situation with their colleagues and considered the practicalities and potential impact of making changes at a late stage. Retaining planned assessments, finding ways to be more flexible, and offering extensions all suggest that the survey respondents were mindful of students' needs and sought to be as fair as possible.

Most participants (83%) indicated that their universities operated a "no detriment" policy throughout this emergency phase. A no detriment policy was put in place to ensure that no student was academically disadvantaged by the situation, including the alternative teaching and assessment arrangements. These policies recognised the potential disruption students may have experienced through no fault of their own but may have promoted grade inflation through educators being more lenient when marking. This concern was not substantiated; 76% of our sample indicated they did not change the way they graded. Educators stressed that while understanding that students may have experienced difficulties, they had an ethical duty to maintain standards in grading. One educator wrote:

> "All work was marked with the same rigour and expected the same quality. This safety net, the extensions available and increased student support, was enough."

Nonetheless, 14% of respondents indicated they felt the results were rather more generous (10% were unsure):

> "The new system of grading students was completely new and caused a bias towards students achievement compared to the traditional system of grading and classification".

Feedback

42% of educators increased the amount of feedback they provided while 43% changed the medium they used to provide feedback. In the main, this increase and change of mode occurred through a move towards more audio and video-based feedback. The quick uptake of MS Teams or Zoom may have made this medium of feedback more accessible and widespread. This move toward digital modes of feedback is consistent with a rise in research attention to the use of technology-mediated feedback (Pitt and Winstone, 2020). Learning management systems combined with Turnitin's similarity detector-based software (which can facilitate marking and feedback, too) already have a strong foothold in the sector. Thus, some educators may have already been using such software to provide feedback information. It appears, though, that this trend was somewhat accelerated given the shift to online working. One participant remarked:

> "I made more use of spoken/recorded feedback and whole-class feedback on short video."

While providing feedback is an accepted part of the assessment and feedback arrangement within HE, promoting feedback-seeking behaviours is less established. Feedback-seeking is one of the main areas emphasised in research on students' feedback literacy (Carless and Boud, 2018). While feedback literacy is still a new concept in the feedback literature, it has permeated recent educator practice and literature discourse. In the emergency phase, participants were almost evenly split over whether student feedback-seeking behaviour had changed, with 38% agreeing or strongly agreeing; 31% neither agreeing nor disagreeing; and 31% disagreeing or strongly disagreeing. Three educators gave three different experiences:

> "I felt the differences were minor and students who usually seek feedback, still sought feedback."

> "I have never received so many requests for feedback – normally I might hear from 25%, in summer 2020 it was 75%."

> "Students seemed less interested in feedback as a safety net was in place."

Students may have demonstrated different feedback-seeking behaviours due to their particular, changed circumstances. Some students may have found themselves with more time as they were no longer working in part-time jobs; others may have had less as they may have been juggling commitments to, or caring for, family members.

How was the preparation phase different from the emergency phase?

In this section, we focus on the changes and differences between the emergency phase and the preparation phase. Given government-mandated social distancing requirements, the sector approached autumn 2020 with a hybrid offering. Many universities opted for remote, pre-recorded lecture content and face-to-face seminars or workshops where possible. Planning for the entire year was challenging, though, given the looming threat of further lockdowns that would require another shift to complete remote teaching.

After their experiences in the emergency phase, educators felt well prepared and supported to make decisions about changing their assessments in the preparation phase. We asked participants questions about their preparedness for each of the emergency and preparation stages ("I felt prepared to change assessment design in the…phase"), which revealed a significant difference between the two time points (emergency phase $M=3.62$, $SD=1.22$ vs preparation phase $M=4.03$, $SD=1.01$; $p<.001$). Likewise, educators felt significantly more "confident in my ability to change my assessment design" (emergency phase $M=3.97$, $SD=1$ vs preparation phase $M=4.16$; SD.94; $p<.001$). These responses are a testament to university efforts during the summer months to support staff and put in place the mechanisms to expedite changes, as well as staff engagement with these opportunities. Most respondents indicated that their university had put in place fast-track review processes for changes in assessment (fast-track process: 67% yes, 21% no, 12% unsure).

Fast-track review processes, as well as other university supports, may have facilitated swift assessment design changes. While few educators changed their assessment design in the emergency phase, 68% of participants indicated they planned some modification or change to the design of assessments during the preparation phase.

66% of educators agreed or strongly agreed that they would make changes to assessment design to ensure academic integrity. They were significantly more likely to consider academic integrity in the preparation phase than in the emergency phase (emergency phase M=2.98, SD=1.30 vs preparation phase M=3.75, SD=1.10; $p<.001$). Examinations were a difficult area to manage during the emergency phase. Many institutions switched from in-person proctored exams to online take-home, open-book exams, which participants perceived as perhaps the only option to quickly plan for assessments that were very proximal to the first lockdown. Qualitative comments revealed that educators' experiences from the emergency phase influenced their academic integrity considerations in the preparation phase:

> "I didn't make any changes to my summer exams and I suspect there were some incidences of students doing far better than they may have if things were normal. This made me really think about how my exam would be structured next year if things are the same. I am going to make it more difficult to be academically dishonest for sure."

More than half of the respondents also agreed or strongly agreed that they were planning changes to make assessments more interesting/engaging (64%) or more inclusive (55%). Nearly half intended to make changes to "make it more authentic to tasks in professional life or to the nature of the discipline" (49%) or "integrate various employability skills" (47%). These results suggest that the nature, structure and form of assessments may be shifting, with the primacy of traditional examinations potentially coming into question as a result of the pandemic.

We discussed feedback-seeking behaviour in the emergency phase. In the preparatory phase section of the survey, we asked educators to consider whether they planned to increase the provision of feedback. Results indicated there were no significant differences between educators' provision of feedback in the two phases (emergency phase M=3.10, SD=1.15 vs preparation phase M=3.06, SD=1.12). This finding is not necessarily negative, though, as quantity is not as important as quality and opportunities for students to use feedback.

In the preparation phase section of the survey, we asked several questions about educators' plans for changes in feedback practices. More than half of participants strongly agreed or agreed that they were planning to make changes to provide opportunities to "build a relationship with my students" (73%), "act on feedback prior to summative submission of their work" (59%), or "use feedback from one assessment to improve the next assessment (58%). These responses suggest educators were more actively considering how feedback may be designed into the process so it can be more impactful. We speculate that the sector's increased focus on assisting educators to plan for the 2020-2021 academic year may have positively impacted on the participants' feedback intentions.

The final group of questions in the preparation phase section of the survey asked educators about their intentions for technology use in their feedback practices, just as we had asked about the feedback medium in the emergency phase. Results suggested that most participants were not planning to increase their use of technology in feedback in 2020/2021; with less than 40% of respondents agreeing or strongly agreeing that they were making changes to provide students with audio (37%), video (30%) or screencast (20%) feedback. However, they largely reported that they felt confident in using new technologies to provide feedback with 63% agreeing or strongly agreeing. At first glance, the results appear to suggest a negative view of technology use. However, if we combine these with responses from the emergency phase, where a substantial proportion of respondents indicated they had embraced its use, we see that there may be a shift toward audio and digital technology-mediated feedback overall. It could be that participants adapted in the emergency phase and were happy with its use. Thus, further research to understand and inform the use of technology-enhanced feedback post-pandemic may be particularly useful.

Discussion

Our findings suggest several areas of assessment and feedback where practice may be shifting. In this section, we will discuss assessment and feedback separately, highlighting specific key messages for practitioners and researchers to consider when reflecting on the last year and planning for the future.

Assessment considerations in the post-pandemic era

Before the pandemic, assessment innovation was typically hampered by lengthy, bureaucratic review processes. The participants in our survey indicated that institutions were quick to respond to the emergency phase and sped up assessment modification processes during the preparation phase. When those processes were streamlined, many of our participants made substantive changes over a single summer. The pandemic has demonstrated that universities can facilitate timely educational changes. Thus, we see opportunities for the sector to become more agile in future review processes to promote ongoing innovation.

The shift to online, unproctored examination processes also raises questions about the role of examinations in the future. Must we return to them? If we do not, how can educators ensure rigour, integrity and fairness for all in alternative assessment formats? The fact that the sector has experienced two academic cycles without closed-book, timed, proctored exams means that educators were forced to experiment with and learn from alternatives. But it also means that students – both in HE and in their earlier schooling – have not gained experience with old-school examinations. If we suddenly move back to examinations as they were practised pre-pandemic, we must be very careful in how we prepare students for them. If we continue with alternatives, we need to build on the heightened awareness of academic integrity risks resulting from the pandemic accommodations. We can learn

from the mitigation efforts educators engaged in during the pandemic to ensure robust and fair assessments in the future. Further research on the nature of and extent of reliance on closed-book exams versus more authentic and interesting assignments in the post-pandemic era is warranted.

Feedback in a post-pandemic era

As we have seen in our data, technology-enhanced feedback seems to have increased during the pandemic. However, simply providing feedback in another format is not enough. As we move beyond the pandemic era, we need to consider how this feedback is designed, integrated and evaluated. Recent advances in feedback research, for example, emphasise dialogic interaction and give primacy to the role of the student in the process. Literature suggests that the most prevalent use of technology involves digital delivery of feedback information using audio, video and screencast technology (Mahoney et al, 2019). Audio feedback, for example, can deliver more detailed comments than might be possible through the more traditional written medium (Merry and Orsmond, 2008). Students may also perceive audio feedback as more personalised than written feedback (Gould and Day, 2013), easier to comprehend (Merry and Orsmond, 2008), and more supportive in tone (Ice et al, 2007). Students often interpret audio feedback as a form of dialogue as non-verbal cues such as prosody, emphasis and tone can all be communicated in ways that are simply not possible with written feedback. Video feedback affords greater individualisation and personalisation than written feedback (Henderson and Phillips, 2015), and screencast feedback has the further benefit of markers being able to pinpoint the locus of their comments (Mayhew, 2017). However, although technology-enhanced feedback methods give precedence to the spoken rather than written word, this does not automatically make them dialogic.

For technology-enhanced feedback to facilitate dialogic interaction, the practice needs to be used in ways that move beyond the transmission of feedback comments, towards two-way interaction and student enactment of feedback. Research needs to move beyond questions of student satisfaction with these new technologies to consider whether they lead to improvements in student learning. We must avoid merely replicating some of the well- documented limitations of traditional feedback practices as we embrace new technologies in the post-pandemic era.

Fortunately, our results suggest that, when redesigning their assessments for the pandemic uncertainties and constraints, practitioners were attending to building relationships with students and creating more opportunities for dialogue and enactment of feedback. Thus, the messages associated with feedback literacy and dialogic feedback appear to be making their way into practice. The pandemic disrupted taken-for-granted assessment practices, providing an opportunity for academics were rethink and redesign assessment and feedback practices. Our survey suggests that this disruption provided the impetus and the support to seed innovation.

Recommendations

There have been a number of areas within assessment and feedback which have seen great change as a result of the pandemic. Based upon the research reported here we recommend that in the post-pandemic era we should focus upon a greater understanding of the following areas. Firstly, we see opportunities for the sector to become more agile in future review processes to promote ongoing innovation in assessment design. Secondly, a thorough consideration of the nature and purpose of examinations is recommended. Finally, we recommend that educators consider how online forms of feedback are designed, integrated and evaluated by academics and subsequently enacted by students.

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Scaling up flexible assessment

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Abstract

Responding to the global Covid-19 pandemic has necessitated large-scale institutional change to assessment in higher education. This paper captures assessment change work undertaken at Teesside University that has prioritised and supported the design and implementation of flexible assessment arrangements on an institutional scale. Major developments across the initial reaction and subsequent consolidation phases of the university's response to the pandemic are discussed. The challenges and opportunities of facilitating and embedding greater flexibility in assessment are highlighted, along with the key structural and pedagogical principles and considerations for scaling up flexible assessment university-wide. The paper closes with some critical questions about the role of 'flexibility' in positioning future-facing university assessment post-pandemic.

Introduction

For higher education globally, the Covid-19 pandemic has been a focusing event, compelling universities to rethink how the significant resources devoted to learning, teaching and assessment might be reconfigured (even reimagined) to better support student learning across different modes of delivery. A focus on 'flexibility' in assessment has, therefore, been vital for a sector in a state of flux (Brown and Sambell, 2020b). This paper documents work undertaken at Teesside University to prioritise and support the design and implementation of flexible assessment arrangements on an institutional scale. Mapping major institutional developments from an initial 'reaction phase' in spring 2020, through to a subsequent 'consolidation phase' and planning for a very different 2020/21 academic year, the paper shares key insights and challenges, and discusses the important steps and considerations for developing and implementing scalable flexible assessment.

The reaction phase: supporting viable 'alternative' assessment arrangements

The onset of the pandemic in spring 2020 necessitated large-scale and rapid institutional change to university assessments. Since students could not attend on site, and to maintain some level of continuity for students and their learning, major changes were made to manage assessment processes remotely. Initially, this resulted in largely pragmatic conversations about the short-term changes to adapt existing assessment diets. For Teesside, as with other higher education institutions (HEIs), this early phase involved significant upheaval and the rapid instigation of emergency protocols and quality management processes. In those instances when there was a slightly longer lead-in period to make changes, or for those module assessments where a straight replacement for traditional examinations was either not possible or desirable, learning and teaching leads across the institution explored the changing pedagogic landscape (ie Andrade and Alden-Rivers, 2019; Elkington, 2019; Sambell and Brown, 2020a, 2020b, 2020c) considering what workable alternative forms of assignments could be put in place. This change work was framed by the principle of 'no detriment'

by which no student should be disadvantaged because of the alterations to assessment being introduced, as well as the belief that an alternative online assessment should not equate to settling for a lesser form of assessment, but rather a different mode to achieve the same learning outcomes.

It was essential to ensure that academic staff, quality assurance colleagues and management recognised the challenges that making such fundamental changes would present and worked to mitigate the difficulties faced by students and others in flexible and compassionate ways. Transparent and practical planning was of paramount importance for establishing alternative assessment arrangements at such scale, taking account of quality assurance requirements to ensure the integrity of any awards offered and maintaining consistency of standards across disciplines. The quality assurance of alternative assessment arrangements was ultimately addressed through the introduction of a module review and approval exercise conducted at course-level and purposely designed to establish viable, short-term, alternative assessments.

This review and approval exercise formed an important and definitive quality assurance measure for large-scale assessment change across each of the university's five schools. Being administered at a school level meant responsibility for overall decisions was retained locally, with schools and departments able to exercise a degree of control over the nature and extent of assessment change applied. Such structural flexibility (Barnett, 2014) proved vital for the effective and efficient implementation of emergency quality assurance processes. It also provided a useful mechanism for framing decision-making, with academic staff able to see first-hand the rigour involved in devising short-term alternative assessment arrangements at module and course level.

Academic colleagues were encouraged to apply a balanced pragmatism when exploring alternative assessment strategies with respect to end-of-semester assessments that allowed students to be productive in terms of their learning, supporting progression and paving the way for attainment, while also getting to grips with the digital tools and practices required. Relatedly, a set of core considerations were produced in partnership with key learning and teaching leads within schools to help support staff as they reconsidered their existing assessment arrangements alongside the requirements of a purposely developed framework for hybrid delivery at Teesside (Considerations and Resources for Supporting Alternative Assessment Methods, 2020). The framework set out clear practice expectations regarding core aspects of curriculum delivery in a multi-modal (physical and digital) student learning experience.

On completion, this initial phase of review and approval revealed a wide diversity of views on the most appropriate forms of alternative assessments to be taken forward in the short term. The prevalence of traditional assessment methods such as the unseen, time-constrained, invigilated examination exposed the high-risk nature of many normative assessment arrangements and strengthened concerns around the inclusivity of alternative approaches (Baughan et al, 2020). There was widespread evidence of a movement away from traditional examinations toward coursework tasks or variations on open-book or take-home exams that could be completed remotely. However, the imperative of securing viable summative assessment alternatives, alongside the need to provide a reliable, verifiable mark for each individual assignment, in many cases functioned to limit the use of assessment methods that have demonstrable value for enabling learning, such as formative

(assessment-for-learning) processes. This was upheld through justifiable concerns about staff workloads and consistency and fairness in marking and moderating student work.

Through the rapid implementation of emergency protocols and quality management processes, the university demonstrated remarkable structural flexibility in the degree to which it has been able to flex its constituent systems (and associated resources) in response to a changing environment, while maintaining the necessary integrity of outcomes. Swift proliferation of digital modes of delivery meant academic staff needed to demonstrate a certain level of flexibility, adapting to the demands of changing patterns of work and student learning across a multitude of inter-connected, digital and physical environments. However, as the university began the planning process for an increasingly uncertain 2020/21 academic year, the need for hybrid learning and alternative assessment arrangements to remain in place for at least the autumn semester presented new challenges. While there was more time available for planning than in the initial 'reaction' phase, significant shifts in pedagogical processes and practices were required if flexible assessment was to be meaningfully realised and sustained at course level, aligned to the requirements of a hybrid model of learning and teaching and the possibility of a combination of on-campus and online delivery from September 2020.

The consolidation phase: developing flexible assessment for hybrid learning

In seeking to establish a practicable definition of flexible assessment design, and to ensure this was subsequently carried forward into academic practice and assessment processes, it was important that key elements were jointly owned and appropriately contextualised (Bolman and Deal, 2017). Development of a fuller conceptual understanding of flexible assessment that could be shared across the institution was a crucial first step. A period of focused consultation with school learning and teaching leads helped to shape a shared vision for flexible assessment, the nature and direction of which was heavily influenced by the collective learning gained through the emergency phase. This first step gave the institution a way to define and discuss flexibility in assessment as a means of responding to students' individual learning needs, as well as the needs of the curriculum, as viewed through the lens of a hybrid delivery model. The proliferation of learning technologies and digital tools, coupled with increasing diversification of learner engagement with hybrid learning and teaching activities, provided further context for developing flexible assessment.

It was also important to recognise the power of regulation and guidance as levers for enhancement and to use them as a force for positive change. Narrowly conceived regulation can focus staff on minor details of assessment, diverting attention from assessment as a whole process. It can also lead teaching staff to rest heavily on summative assessment or reject more diverse methods with benefits for learning or inclusion because of concerns regarding equity and fairness. It was imperative that new regulations and guidance were clearly understood and did not provide either real or perceived barriers to making changes in assessment practice. Experiences of assessment change in the emergency phase had illustrated how simple guidance, though necessary in the circumstances, can be interpreted rigidly, limiting the ability for course teams to adopt more valid, inclusive and authentic assessment methods. Effective assessment usually involves a trade-off between validity, reliability and manageability, the character of which will necessarily vary for individual tasks and circumstances

(Evans, 2013; Sambell et al, 2013). The emergent flexible assessment principles and guidance encouraged a shift in emphasis away from purely procedural approaches to devising alternative assessment arrangements towards a broader view of assessment wherein students' differences could be proactively considered.

Repeating the previously developed module assessment review and approval exercise within this expanded view of assessment change provided a scalable means of facilitating and capturing regular dialogue with schools as a basis for promoting change. The emergent flexible assessment principles and guidance offering a supportive framework for reconfiguring, and where necessary rethinking, existing assessment designs and arrangements. Prioritising flexible assessment arrangements in a hybrid model meant a shift in focus beyond determining viable 'alternative' assessment arrangements in the short-term, on to more sustainable approaches and designs that are sensitive to the needs and circumstances of students, giving them more control and ownership over assessment processes – with no learning deficit. Three core principles provided the basis for thinking proactively about flexible assessment arrangements at module and course level:

1. Flexible assessment is **inclusive**
2. Flexible assessment is **learning-focused**
3. Flexible assessment is **shared and transparent**

Figure 1, **below**, illustrates the key characteristics and practical considerations for flexible assessment design and practice aligned to each principle (to view expanded guidance, see Flexible Assessment for a Hybrid Model).

An important second step was enhancing staff preparedness and capacity for actioning flexible modes of assessment and learning that were sensitive to the anxieties generated through such unprecedented assessment change, including the local needs and context, while also providing the basis for persevering in questioning taken-for-granted assumptions and practices. School-level involvement, particularly through local learning and teaching networks and groups, was pivotal in helping to foster coalitions of support across the institution. This step was supported by a planned and sustained staff development strategy to support the implementation of assessment change.
A workshop-based approach was deployed at school level with a focus on sharing ideas and practice and raising the profile of flexible assessment principles, alongside new staff guidance setting out strategies for embedding flexible assessment (see Strategies for Embedding Flexible Assessment). Working early on to nurture a shared understanding and discourse around flexibility in assessment through a targeted programme of staff development proved an effective way to communicate progress and ideas, address associated concerns around standards and processes, and provide a model for alternative practice arrangements.

Implementation of these steps has brought about several positive outcomes during this consolidation phase. Firstly, the principles and guidance provided a framework for introducing flexible assessment at scale, enabling the systematic review of more than 2,900 modules and well in advance of 3,000 assessments across all provision. Secondly, a structured process of review and support has helped

learning and teaching leads to examine and account for critical aspects of assessment change on an ongoing basis. Thirdly, it has provided a practicable means of focusing more squarely on the valid and reliable assessment of learning outcomes at both module and programme level. Crucially, such a view helps to frame assessment design to consider the learning journey and experience of each student and to critically evaluate what needs to be assessed, and how, within a hybrid delivery model.

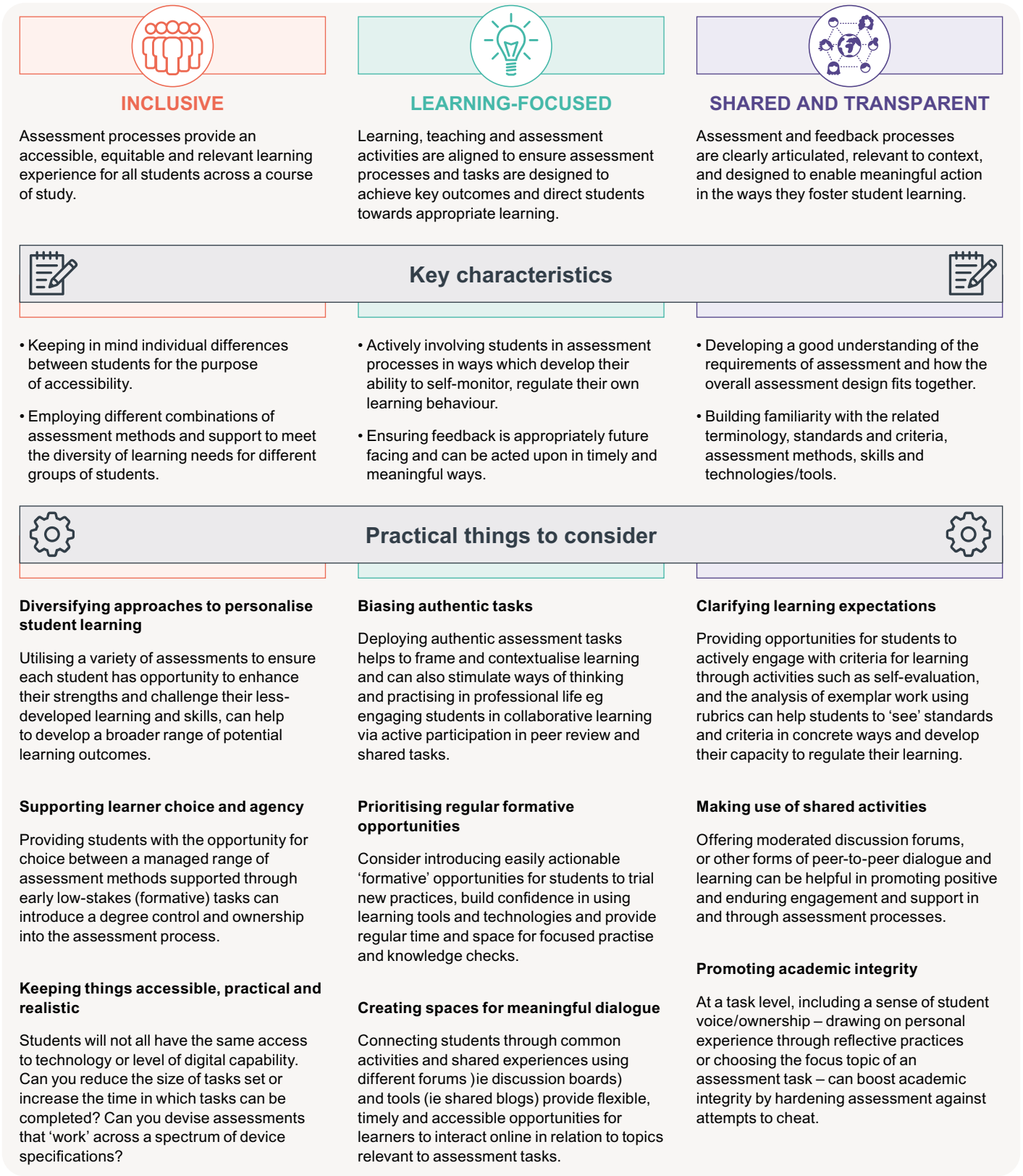
Schools and departments have certainly varied in the degree to which they have bought into the principles and practice opportunities of flexible assessment. For many reasons, schools and departments have developed different orientations toward the idea of flexibility in assessment that may not be immediately apparent but are likely part of their internal educational cultures. What is clear is that flexible assessment embraces overlapping and contested value systems with multiple and even conflicting motivations shaping the nature and extent of assessment change in response to the pandemic and the shift to remote learning. Flexible assessment, therefore, becomes a site of value conflict, with the management of flexible assessment becoming, in part, the management of conflicts between different orientations to flexibility in assessment. Importantly, this diversity in orientation has revealed that there are multiple ways to be flexible with assessments while still challenging students, maintaining rigour and continuing to provide the required structure and support.

There are signs, too, that the rapid expansion and deployment of digital learning tools and technologies has been a vector for change in assessment practice for many subject areas. By harnessing relevant technologies and digital tools, the student experience can be enhanced through better access to assessment information, a broader range of tasks, automated or speedier feedback, student-student and student-staff dialogue regarding assessment, and support for peer and group assessment. Crucially, such tools have provided opportunities for new forms of representation and the use of multiple modalities to demonstrate student achievement and progress in a variety of ways and over different timescales – ie blogs, e-portfolios, and a variety of audiovisual products, such as podcasts, have been successfully implemented, enabling students to create multi-modal artefacts and different forms of documenting their progress and showcasing achievement.

Sustaining flexible assessment – moving from here to where?

Set against the backdrop of unprecedented challenge and sector uncertainty in higher education, the approach and work outlined above has provided a useful structure to guide discussion, planning and design, as well as a starting point for dialogue, thinking and support surrounding the development and implementation of flexible assessment opportunities at an institutional scale. The approach has also created a basis for integrating flexible assessment into longer-term strategic planning processes. What is clear based on the experiences of the last twelve months is that truly future-facing assessment designs must be adaptable, ideally offering an element of flexibility and choice for students in how they are able to navigate and satisfy the expectation to demonstrate required learning outcomes. To contemplate the longer-term considerations for sustaining flexible assessment means exploring the relationship between flexibility and assessment more deeply. This, in turn, involves critical questions about the direction of educational travel post-pandemic and how best to position university assessment now and in the future.

Figure 1: Principles for designing flexible assessment



How can we ensure students experience assessment as a valid measure of programme outcomes which are both intrinsically worthwhile and useful in developing their future learning and employability?

There is an assumption that the accumulation of assessment in discrete modules will cover the programme outcomes, but this can result in students and staff failing to perceive a coherence to their programme, diminishing opportunities for formative assessment and a failure to assess the validated outcomes (Jessop et al., 2014; Whitfield and Hartley, 2019). Programme level outcomes generally require complex learning benefitting from integrated assessment and feedback delivered over time (Hartley and Whitfield, 2012). Such outcomes are not well served by multiple narrow assignments and examinations with a summative function (assessment of learning), which can lead to students taking a strategic approach to their studies, potentially limiting their broader learning and independent thinking (Carless, 2015; Sambell et al., 2019). Effort needs to be focused more squarely on the valid and reliable assessment of programme outcomes rather than poorer quality measurement of every individual module outcome. There is potential, through embedding flexible programme assessment strategies, to reduce the quantity of summative assessment with its accompanying quality assurance load (second marking, moderation, external examining), which may free resources for use in formative assessment processes.

What kind(s) of flexibility should be offered for university assessment to be appropriately future facing?

The response to the pandemic has revealed a comparative lack of future perspectives in the design of higher education assessment processes. Framing assessment ‘flexibly’ is concerned with enabling students and staff to think critically and creatively about their prospects, to begin to generate alternative visions of future possibilities for learning and teaching, and to initiate action in pursuit of these. The educational focus of flexible assessment, therefore, needs to be extended beyond an emphasis on knowledge and understanding towards more engaged approaches to learning, taking the concept of capabilities as not just accumulated abilities, but their deployment in both familiar and unfamiliar circumstances. This connects with the idea of flexible learning (Ryan and Tilbury, 2013) in its focus on the types of adaptive abilities required to apply knowledge and skills and the refinement of these abilities based on experience and learning from a variety of outcomes (both intended and unintended). Associated forms of pedagogic flexibility may naturally lead to divergent outcomes in the pedagogic relationship, with learners positioned as active partners in shaping their educational programme. Assessment and feedback activity in this relational frame would provide the scope to use a more effective range of authentic assessment work, providing information about student achievement to both teachers and learners, and allowing teaching and learning activities to be responsive to the needs of the learner, whatever their mode of study.

How can we devise assessment systems that are able to flex and be responsive to the demands of a changing HE environment?

Effective use and integration of information systems and learning technologies has been a precursor to fundamental changes in assessment policy and practice amidst the hybridisation of university learning environments during the pandemic. However, with aspects of hybrid delivery likely to remain as the sector and HEIs reacclimate to a post-pandemic world, the management of flexible assessment requires a systems perspective on the educational infrastructure, recognising how generic pedagogies change shape in the context of different institutional arrangements, academic departments, and educational agendas. Arising here are a range of aspects of flexibility in teaching and learning, including the flex that educators experience in the shaping of their own assessment approaches, how students navigate across the constituent elements of a programme of study, and the extent to which information systems and digital technologies are effectively harnessed to enhance assessment practice, improve feedback, and streamline assessment information and administration. Each of these factors need mapping if the full potential of the idea of flexible assessment is to be realised.

Concluding remarks

This paper has made the case for scaling up flexible assessment in higher education in recognition that as the post-pandemic world changes, so too our pedagogic systems and practices must also find new forms, not just reacting to current trends or repeating dominant patterns of thinking. Whilst advocating for greater flexibility in assessment poses challenges at every level of university operation, the paper has presented important practical insights into what might be possible if large-scale assessment change is approached in a holistic, integrated, and compassionate way.

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Fairness and the maintenance of academic standards during the pandemic: a position paper

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Abstract

This position paper considers some of the key issues and tensions inherent in both maintaining academic standards and being fair to students in higher education during the pandemic, including some common 'no detriment' processes adopted by many higher education institutions (HEIs). We suggest that, in striving for fairness, the sector has responded well to challenges, acted swiftly and made some positive changes, especially around increased flexibility. But some of the changes may not be fair or appropriate, and there is less evidence about any strategic approach – either institutionally, or more generally across the sector – to ensuring the maintenance of standards. It appears appropriate to change input and process measures (such as mitigating/exceptional circumstances regulations). However, changes to the academic standards applied to student achievement (their assessment outputs) are less defensible, such as the surprisingly common practice of scaling of marks at module level against the performance of previous cohorts. We conclude that while the pandemic has been, and continues to be, very challenging for higher education, it has compelled us to usefully question the validity and purpose of some of our regulations and assessment practices, and especially whether they do actually assure standards.

Introduction

> "Never before has the concept of fairness felt so in conflict with that of good assessment. …… The principles of good assessment say we should expect the same standard of performance to achieve a particular grade …… as in previous years, such that they truly reflect what students know and can do, and enable stakeholders to interpret results meaningfully …… But to enforce that seems grossly unfair on young people who have missed sizeable chunks of learning through no fault of their own."

Thus, Louise Benson (2021), lead psychometrician at the National Foundation for Educational Research, poses the dilemma this paper will explore in relation to higher education. To what extent is it possible to be fair while maintaining standards? What changes may be acceptable? What is not? Fairness to whom? These questions have become particularly pressing over the past year (2020-2021) during which the pandemic has compelled unprecedented changes to assessment policy and practice. This position paper examines some of the key tensions and issues inherent in both maintaining academic standards and being fair to students.

'No detriment' processes

The sector certainly cannot be accused of being slow in trying to meet the challenges posed by the pandemic, and ameliorate the needs and anxieties of students. In April 2020, the Quality Assurance Agency (QAA) recognised that "many providers were introducing 'no detriment' or safety net models in response to the coronavirus pandemic" (QAA, 2020, 1):

> "A 'no detriment' policy seeks to mitigate against the impact of a set of circumstances, by ensuring that an individual is not unfairly disadvantaged by a requirement to change rules or regulations, in session. Most commonly this translates into calculating and evaluating two outcomes:
>
> + the outcome as it would have been if the changes had not been implemented
> + the outcome after implementation of the changes.
>
> Under a 'no detriment' approach, the outcome that is more favourable to the individual is retained."

In other words, students are guaranteed that their outcomes in terms of final grades would be no lower than their academic performance prior to the pandemic. So, while this can be considered a very worthy aim, of not unfairly disadvantaging the student, in terms of standards this should surely ring alarm bells? What if the student outcome does not meet the required standard? Does this mean that the student should still pass, or get a higher grade regardless? And how will "the outcome as it would have been" be calculated? If that is based on the student's previous performance that may at least appear fair. But if the assumed outcome that would have been achieved is calculated for a whole module through mathematical 'scaling' against previous cohorts, such a process would arguably have little intellectual justification – an issue we will return to.

Institutional responses

So what has the sector done in striving for fairness by altering quality assurance processes? A survey (n=53) by the Academic Registrars' Council (ARC) (2021) found that nearly 70% of respondent institutions relaxed their approach to permitting short-term extensions, of those:

+ over 75% relaxed their approach to additional (mitigating/extenuating/exceptional) circumstances
+ with 90% of those having removed any requirement for independent evidence
+ and 45% using a blanket approach, or an automatic process triggered by self-certification.

All of these responses would seem to be very sensible adjustments that aim to be fair to the students through changing *input and process measures* while not affecting the ultimate *academic standards* expected. However, there are potentially more worrying findings from the ARC survey when it comes

to the question of standards. Nearly 50% of respondents (n=53) said that they either have, or are considering, revisions of their regulations governing progression and/or the awards process. And the more detailed follow-up question (n=20) reveals the nature of these revisions:

+ 70% permitting progression with a higher volume of credit outstanding
+ 50% adjusting assessment to reduce burden/workload
+ 25% lowering the mark required for compensation/condonement to be permitted
+ 50% scaling at module level.

Let us consider these in order. Progression with increased credit outstanding should arguably not detrimentally affect standards if the learning outcome/s will eventually be required to be met by the end of the programme. However, there are potential concerns in allowing greater carry over of credit. One is that the knowledge that this is now possible may alter student study behaviour. It has been found that just the prospect of a resit exam can lead to lower investments of study time for the initial assessment (Nijenkamp et al, 2016). There is also the additional concern that, if resitting will eventually result in the student having a heavier study burden through the addition of one or more resits or retakes while other modules are being taken, then this may result in both student stress and worse grades. So a remedy for unfairness in the short-term results in unfairness down the line.

As to a reduction in assessment workload, it has long been stated that there is too much summative assessment in higher education (eg Knight, 2002; Rust, 2000; Price et al, 2010; Sambell et al, 2013; Jessop and Tomas, 2017) while not enough formative. In many contexts, there is far more summative assessment than is required to reliably and validly assess for progression or qualification. So, if a strategic approach is taken to its reduction across a programme, this may be a very sensible win-win revision.

However, reducing summative assessment can reduce students' time on task and thereby their learning. It is widely understood that summative assessment can both focus and drive student learning. So, is there any evidence that students are maintaining the time on task they would have spent, or are they studying for fewer hours? Reducing assessment in an attempt to be fair seems to ignore the question of what motivates student study behaviours. A priority for the design of assessment regulations should not only be the valid and reliable measurement of performance, but also the encouragement of student learning.

Once there are sufficient assessments to generate enough learning activity, the issue of how to assure standards can be tackled independently – for example by making three out of four assignments required but formative only, and only one summative, or by having an exam or examinable special assignment of some form separate from formative assignments.

If, however, the reduction of assessment simply means reducing the word count for an essay, or arbitrarily dropping one or more of the assessments on a module then this may also be of little, if any, benefit. In fact this could be detrimental and ultimately affect standards. For example,

reducing word count without changing the assessment task can make it more challenging, particularly for students for whom English is a second language. There is a danger that simple administrative solutions, like reducing assessment, ignore potentially better pedagogic solutions.

The appropriateness of any compensation or condonement for failed elements of a course depends on, among other things, the nature of the course and discipline. The knowledge structures of some courses are hierarchical, linear and cumulatively layered (Biglan, 1973; Neumann, Parry and Becher, 2002). Allowing knowledge gaps in these types of disciplinary courses may, in some instances, undermine the whole programme of learning (for example, medicine or engineering). For other courses where knowledge structures are less hierarchical and knowledge is understood as 'qualitative, constructed and interpretative' (Jones, 2007, 87) the compensation or condonement of missed elements may be valid. This raises the significant question of whether these revisions of regulations are fine-grained enough or are standardised and simply applied university-wide.

However, out of this list of revisions perhaps the most worrying is the suggestion of scaling at module level. As stated earlier, it is hard to see how this can be justified and is where mark/grades part company from standards. Changing marks/grades without reference to evidence of student performance is problematic. Assuming that the results of a cohort on a module should automatically mirror the results of a previous year's cohort is dubious. Student groups are not uniform, nor do individual students respond in the same way to assessment and teaching contexts. Consequently, scaling can undermine academic standards. And, perhaps, it is almost as indefensible as the application of so-called norm-referencing – a practice which is hopefully now largely consigned to history. So what is worrying is that 50% of respondents to the ARC survey are either already using scaling, or considering it. While a balance between a pragmatic solution to adverse circumstances and theoretical arguments about academic standards is understandable, it does depend on the extent of its application. The current pandemic has brought to the fore scaling as a pragmatic solution. This may be appropriate for isolated one-off incidents (eg a fire alarm half way through an exam) but is not fit for purpose when applied more broadly across multiple modules and cohorts as it is likely to result in final outcomes bearing no real relation to expected standards.

One adjustment not covered by the ARC survey is where the nature of the assessment has been changed such as a different assignment task or, most obviously, changing to an online exam (or other form of assessment) as opposed to a physical exam. In a recent examination of the data, published by Wonkhe, it is suggested that: "the sector's traditional forms of assessment clearly disadvantage students from underrepresented backgrounds, [but] 'no detriment' disproportionately benefited black students, students with disabilities, and students from lower IMD quintiles" (Kernohan, 2021). And as Kernohan goes on to say, "this prompts very important questions for the higher education sector – what is it about our usual methods of assessment that disadvantages non-traditional students? And why would we ever go back?" (Ibid).

Conclusion

If we return to our key dilemma – can we be fair to students and maintain standards in the circumstances – it would appear that in striving for fairness, the sector has responded well to the challenge and acted swiftly and made some positive changes, especially around increased flexibility. But some of the changes may in fact not be fair, and there is less evidence about any strategic approach – either institutionally, or more generally – to ensuring the maintenance of standards.

A key argument in this position paper is that it appears appropriate to change input and process measures (such as changes to mitigating/exceptional circumstances regulations). However, changes to the academic standards applied to student achievement (their assessment outputs) are less defensible.

The QAA, while supporting the adoption of no detriment and related arrangements by institutions as "a duty to their students" (QAA, 2020, 2) is also equally clear that "Awarding bodies have a responsibility to protect the academic standard of the qualifications they award" (Ibid). Now, some of us have for some time questioned the degree to which standards are actually assured currently (Rust, 2014; Bloxham and Price, 2015) but the QAA is surely right to say that:

> "Alongside the need to ensure that students are not disadvantaged, awarding bodies also need to be confident – and able to demonstrate – that graduates in 2020 are not advantaged compared to their peers in previous years; and [...] not known as the 'Covid-19 generation', whose degree classifications are not considered reliable."
>
> *(QAA, 2020, 3)*

As with the country as a whole, and what has become almost a cliché of a desire to "build back better", the changes necessitated by the pandemic may, if we choose to take it, have offered us a valuable opportunity to look again at both our assessment and quality practices. Let's build on the move to greater flexibility, to question the validity and purpose of some of our regulations, make strategic reduction in summative assessment, and interrogate rigorously whether our assessment regulations are both fair to all and do actually assure standards.

Acknowledgement

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Evaluative conversations: unlocking the power of viva voce assessment for undergraduate students

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Abstract

Viva voce assessments are widely adopted for the appraisal of doctoral dissertation studies, but they appear underused at undergraduate level. In a period of transition from closed-book written examinations to more innovative forms of assessment, I suggest that viva voce examinations represent an authentic and transformative learning opportunity that should be extended to undergraduate students. The argument builds on a case study detailing the successful introduction of 'evaluative conversations' within a year two undergraduate module in History of Economic Thought at the University of East Anglia, UK. A preliminary evaluation highlights barriers to and enablers of embedding viva voce sessions within assessment design, concluding with considerations over quality assurance, scaffolding and scalability, as well as plans for future developments.

Introduction: viva voce assessment for undergraduates

Viva voce assessments in higher education (HE) are adopted worldwide as tools for the evaluation of doctoral dissertations, but they still appear widely underused at undergraduate level, especially in English speaking countries. Stray (2001) observes that, from the beginning of 1700s, British institutions began to transition from oral assessment to written examinations due to concerns over bias, as well as the challenges posed by scalability in the context of expanding tertiary education. This approach characterises the British HE model, and resonates with the experience of other countries with established reputations as HE providers, such the US and Australia, as well as the adopters of their education models. As observed by Dobson (2008), the viva voce assessment still lacks conceptualisation and remains widely under-researched in the pedagogical literature. Aside from low adoption, the uniqueness of this form of individual oral assessment is also a barrier to systematic reviews. Nevertheless, viva voce assessments are still used in some countries in Europe, such as Italy (Iannone and Simpson, 2012), where many two-stage examinations build on both written and oral viva voce components across a wide range of disciplines.

In their systematic review of the British literature on innovative assessment, Hounsell et al (2007) report on the low take-up of oral assessment. Viva voce assessments for undergraduates are only mentioned in 2% of surveyed contributions and evidence for evaluation appears weak and erratic. A further look into the most recent literature does not show a richer picture. Few and isolated examples can be found across the disciplines, for instance: business studies (Pearce and Lee, 2009), dentistry (Ganji, 2017), education (Carless, 2002), mathematics (Iannone and Simpson, 2012 and 2015) and nursing (Davis and Engward, 2018).

In a period of rapid change and experimentation with innovative, authentic experiences in the learning and teaching landscape, I suggest that further investigation is needed to explore the potential of viva

voce assessment for undergraduates. This contribution aims at enriching the debate within the context of economics education, where the drive for improvements in proficient oral expression as a learning outcome is also grounded in the discipline's employability agenda. In fact, while communication skills are defined as an important attribute for economics graduates (QAA, 2019), employers remark that further attention is needed in this area (Economics Network, 2019). Taking up this challenge implies being imaginative with assessment design. Economics education widely uses data and policy presentation tasks, but students are not yet trained in talking about the discipline through more dialectic formats. Thus, the suggestion of experimenting with viva voce assessment represents a solution worth exploring.

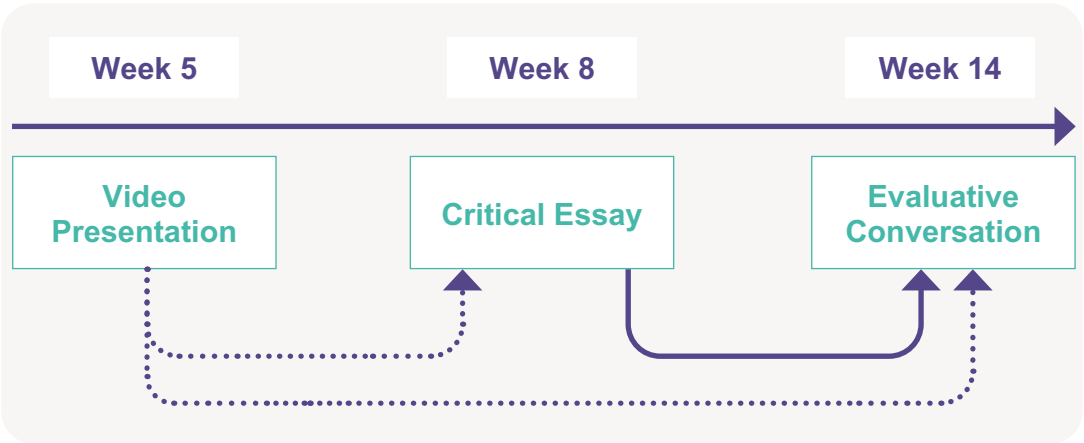
The next section describes how viva voce assessment was introduced in an undergraduate module in economics at the University of East Anglia (UEA). This is followed by a preliminary evaluation of this innovation. My concluding remarks reflect on the whole experience and offer some recommendations.

Module and assessment design

History of Economic Thought (HET) is a year two undergraduate optional module delivered by the School of Economics at UEA. Unlike many other modules in economics, HET is based on critical readings and commentaries and it is non-technical. It is taught over a period of 12 weeks, followed by two to three weeks for revision and assessment. Over each week, the class meets for lectures, where learning materials are presented, explored and analysed. Lectures are also integrated with seminars designed to strengthen students' ability to criticise the theories explored in the syllabus.

From the academic year 2020-21, the teaching was redesigned for blended provision. The most theoretical aspects of the syllabus were repurposed for asynchronous delivery. In turn, synchronous contact time was freed up for practice with original texts and a higher degree of interaction, transforming lectures into livelier workshops and eliminating the need for seminar meetings.

Figure 1: Assessment pattern for the HET module



The assessment design for the module over the academic years 2017-18, 2018-19 and 2019-20 was articulated in: (i) a group video presentation, (ii) an individual critical essay and (iii) an individual evaluative conversation. The initial video presentation facilitated collaborative learning, inviting students to process HET materials for the first time and training them to engage in deeper research for their next assessment. At the same time, students also practised discussing economic theories with each other and sharing findings orally, which built skills in preparation for their evaluative conversation. Students crafted 10-minute videos, submitted by them through the VLE, and received feedback via a marking rubric and additional comments encompassing video editing and clarity of exposition, as well as the quality of the insights offered.

The design of the critical essay, the second assessment piece, has remained unchanged over the years. Students are invited to brainstorm an essay topic and are supported in composing their research piece up to final submission. The marking rubric, shared with the students in advance, provides feedback on the choice of topic (originality and level of challenge), the quality of the research conducted, as well as clarity and rigour in the exposition of their critical analysis. In line with Carless and Boud (2018) and Winstone and Carless (2019), the design of the critical essay is strongly linked to the following evaluative conversation according to a feed-forward mechanism. This means that lecturer's comments do not focus so much on the evaluation of past performance but on actionable suggestions to execute future performances through a constructively aligned sequence of assessment tasks. In this fashion, students receive feed-forward when they share their essay plans, prior to submitting their work; similarly, students also receive feed-forward after their essay is marked, as the comments received must be acted on in preparation for their final evaluative conversation.

Evaluative conversation design

The final evaluative conversations take place at the end of the module. In preparation, students access an online spreadsheet, where they can book available slots. Each student is allocated a 30-minute slot, with each conversation lasting 15-20 minutes, and 10 minutes allocated for completing the marking rubric and feedback. From the academic year 2019-20, face-to-face meetings were seamlessly moved online due to social distancing restrictions. In every circumstance, meetings would be video recorded and uploaded on the VLE. Aside from offering richer feedback, this practice also guarantees that standard quality assurance requirements are met. Each conversation is structured in two parts. In the first part, students are invited to share their response to the feedback received on their critical essay. Since feedback varies across essays, the lecturer ensures that students face a fairly similar challenge based on a template task: (i) brief clarifying questions, (ii) one question asking to expand a point made in the essay, and (iii) one question asking to relate the essay content to another topic covered in the syllabus. All these questions are shared in advance with the students, along with their essay feedback. In the second part of the evaluative conversation, students are asked questions covering any topic in the syllabus.

In order to ensure consistency, each student's performance is assessed using two evaluation tools: a marking crib, as represented in Table 1, and a marking rubric.

Table 1: Evaluative conversation marking crib

Question	Student Response			Needed Prompting?		
	Good	Fair	Poor	A lot	Some	No

The marking rubric was co-created with the first cohort of students enrolled in the module, and it is reviewed every year in partnership with the students. This represents a useful exercise, clarifying mutual expectations about assessment format and outcomes. The criteria agreed with the students are:

+ *response to feedback:* evaluating the correctness, detail and exhaustiveness of the actions taken to apply the feedback received on the critical essay and report back
+ *flexibility and critical ability:* considering how the conversation moved across different topics, providing in-depth answers with limited prompting
+ *exposition quality and clarity:* assessing rigour, use of correct terminology, and the ability to organise responses logically
+ *confidence:* addressing students' ability to be proactive and engaged during the conversation and appearing confident and in control of the discussion.

In agreement with the students, it was decided not to assign a specific weight to each rubric criterion, acknowledging the fact that each conversation is unique in its own merit. Moreover, the confidence criterion was mostly conceived as a further feedback opportunity, rather than strongly influencing the determination of final marks.

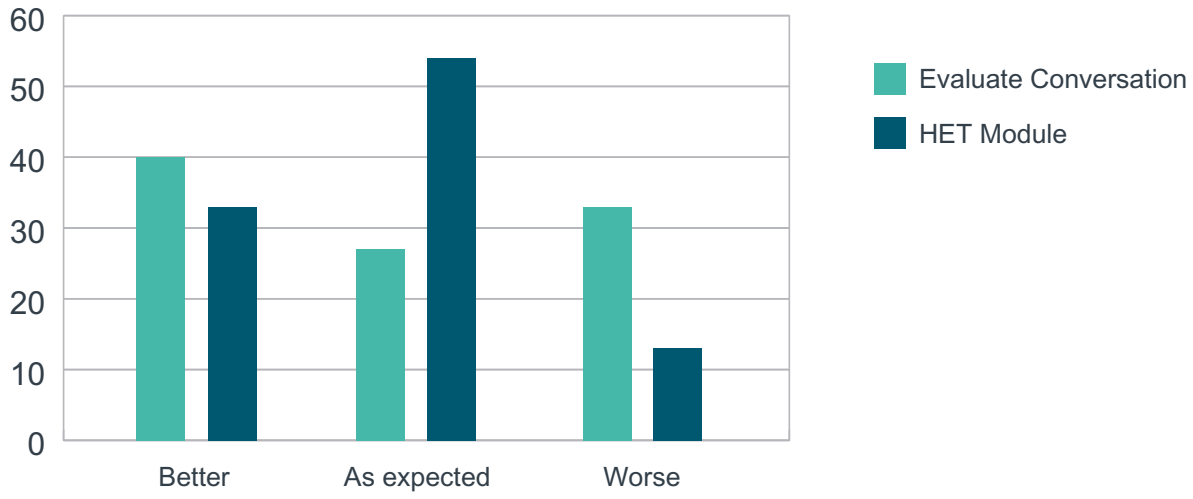
Student's perceptions of viva voce assessment

A preliminary investigation of students' perceptions of viva voce assessment in HET was conducted in 2019, with approval obtained by the UEA School of Economics Research Ethics Committee. Students enrolled in the module were given a questionnaire immediately after their evaluative conversation (and before receiving their final mark and feedback) investigating their experience with viva voce assessment and the module in general. At the end of the questionnaire, students were informed about the opportunity to participate in the module's formal evaluation process and they were asked to give consent for the analysis of their responses. In order to separate out the information processed for teaching quality from the research data, questionnaire responses were collected by a school administrator, matched with student's demographics and shared with the lecturer in an anonymised format. Furthermore, data analysis was conducted after the completion of the teaching cycle and the confirmation of all assessment marks. Out of 50 students enrolled in the module, 30 opted to share

their questionnaire responses for formal evaluation: a response rate of 60%. The respondent group demographics were: 23% females, 23% overseas and EU students and 20% non-native speakers. Thirteen percent of students were not enrolled for an Economics degree. This sample is fairly representative of the demographics at the School of Economics at UEA.

Students were asked to rank their performance in the evaluative conversation task, as well as express their opinions about the quality of teaching and the organisation and management of the HET module; in both instances, students were asked to form a judgement anchored to their own expectations. The results presented in Figure 2 confirm that 87% of respondents reported that the module ran as expected or better than expected, while 67% of respondents believed that they performed as expected or better than expected in their viva voce assessment. This signals that, according to students' perceptions, the design of the evaluative conversation and the challenge posed to students were reasonably well-calibrated. No pattern of association between perception of performance and satisfaction with the HET module was detected, suggesting that students' self-assessment was not biased by opinions about the module or, vice versa, that students' perceived performance did not affect their evaluation of the module. This result is particularly significant when innovative assessment is introduced in a module; the result is also suggestive of students' ownership over assessment performance.

Figure 2: Students' self-assessment and evaluation of the HET module



Further insights into students' perceptions of the evaluative conversation assessment were obtained by asking respondents to elaborate on their self-reported performance ranking. Conducting a thematic analysis on these textual responses allowed the identification of four themes:

+ *Anxiety/confidence at performing the task*
  Around this theme, students commented on their own nervousness at facing presentation tasks, as well as dealing with the uncertainty associated with a mode of assessment never experienced before. Interestingly, these comments were seldom associated with students' preparation, as they mainly related to the process rather than the content of the conversation.

  "I tend to get quite nervous with things that require presenting so had built it up into something far worse than what it was."

  "The conversation approach helped to trigger memories which I wasn't confident that I had."

+ *Students' preparation for the task*

Students reflecting on their preparation mostly admitted adopting surface study-strategies and not following the brief about embracing an appraisal of broader economic ideas rather specific concepts in isolation:

"I had not gone over the content outside my essay…"

"I focused too much on particular topic, rather than a wider perspective."

+ *Support received before/during the task*

A very common observation among the respondents mentioning support was the importance of creating a friendly environment on meeting students as well as during the conversation:

"I was very nervous beforehand. However, the conversation flowed smoothly and I was put in confidence by the examiner."

"Relaxed atmosphere, conversation flowed rather than question to question."

+ *Challenge perceived facing the task*

Reflections around this theme mentioned the specific challenges of viva voce assessment, including time pressure, the need to make sense of what was asked, process information and articulate it in a coherent answer:

"Time went really quickly, felt I didn't get to say as much as I wanted to."

"Struggled to understand what was being asked. (In terms of context)."

"Difficult to think clearly."

Table 2 reports the frequency of each theme by student's perceived performance. Success narratives are mostly associated with feelings of confidence at facing the task, and how this process was facilitated by the lecturer. On the other hand, students perceiving themselves as underperforming mostly attributed this to lack of command over the contents learnt, rather than blaming the mode of assessment. This evidence suggests that the introduction of evaluative conversations did not prevent students from performing at their expected level.

Table 2: Students' feedback themes by viva voce self-assessed performance

Self-assessment	Anxiety or confidence	Student preparation	Support received	Task challenge
Worse than expected	2	6	0	2
As expected	3	5	0	4
Better than expected	7	3	6	1

Some student narratives recognise the usefulness of evaluative conversations more explicitly:

> "I enjoyed the essay writing process as I chose a topic that I found interesting. I also liked the evaluative conversation, as it has improved my ability to take criticism and respond to it."

Reflections and recommendations

The onset of the Covid-19 pandemic has sparked the need for transformation in the learning, teaching and assessment landscape. The transition from closed-book to open-book examinations has revived interest for viva voce assessments for undergraduates as an authentic, plagiarism-proof and enriching alternative to time-constrained invigilated written exams (Sambell and Brown, 2020). In this contribution, I described the introduction of evaluative conversations in a HET undergraduate module at the University of East Anglia. A preliminary evaluation of the pedagogical impact of this innovation was positive as students reported they were able to perform at their expected level of attainment. The challenge posed by this novel assessment was perceived as an empowering opportunity.

Since their first introduction in 2017, viva voce assessment practices have spread across other modules within UEA and beyond. Some useful lessons have been learnt about how to facilitate their implementation and four reflections, along with four respective recommendations, emerge as the most important:

+ *Innovative assessment after the pandemic*
  The challenges imposed by the Covid-19 pandemic generated pressure for a hasty migration to blended and hybrid learning models, as well as the need to devise innovative assessment. While much of the debate surrounds the design of written assessment that is sustainable, effective and plagiarism-proof (or plagiarism-resistant), particularly in an open-book context, my first recommendation is that more consideration could be devoted to oral assessment, such as viva voce examinations. Although underused and under-researched, oral assessment offers the opportunity to design authentic experiences for students, boosting their employability skills and lowering the risk of plagiarism.

+ *Quality assurance*
  The introduction of assessment in non-anonymous settings is sometimes perceived as a challenge to fairness. Interestingly, this reaction is most frequent among teachers rather than students. Ultimately, the risks involved with a more personal assessment set-up must be balanced with the benefits of authentic and engaging experiences, which can truly benefit students and enhance their employability skills in preparation for job interviews. I would recommend that colleagues considering the introduction of viva voce assessment ensure that these are managed in line with standard quality assurance processes: recording performances and enabling a transparent scrutiny of practice. The systematic adoption of tools such as marking cribs and marking rubrics, as well as the development of strategies to tackle unconscious bias during oral assessment, are also conducive to fairness and consistency. In order to facilitate the creation of an inclusive assessment design, I would recommend that assessment criteria should be designed with consideration for the needs of non-native speakers and students affected by learning difficulties. These students could be invited to discuss their concerns in advance in order to arrange bespoke adjustments.

+ *Scaffolding*
  The experience of HET students facing a new challenge was very positive, but it is undeniable that scaffolding was essential to achieve this result. Students gained ownership over the process by being consulted over assessment design, having access to exemplars from previous conversations, and being encouraged to ask any questions and discuss any worries they might have. The importance of establishing a friendly environment prior to the conversation, even if just by exchanging some small talk, was a recurring comment in student's feedback. This was something simple, which was in fact perceived as an essential enabler. Thus, I would recommend that the design of viva voce assessment is explicitly discussed and unpacked for students, addressing rationale, aims and success strategies. Students should also be warranted a sufficient degree of control and ownership over the assessment process, such as in the determination of and familiarisation with the assessment criteria.

+ *Scalability*
  Viva voce assessments are perceived as daunting tasks to implement for large cohorts of students. However, with the allocation of 30 minutes per student, including the editing of the feedback, the time dedicated to each student in HET does not exceed that generally invested by a conscientious marker assessing a standard essay submission. It is also worth considering that, for more technical and less philosophical subjects, the introduction of mini-vivas is still likely to facilitate in-depth assessment with a much shorter duration. Nevertheless, I would recommend that colleagues avoid being over-ambitious in packaging a dense schedule of viva voce sessions. Technical glitches, comfort breaks, as well as time to reflect on performances and provide feedback must be factored in the plan, not to mention the need to allow students some breathing space during their viva session.

The feedback received by colleagues and students highlighted that further improvement can be achieved by facilitating additional practice in preparation for the final evaluative conversation sessions. For this reason, the assessment design for the HET module was modified for the academic year 2020-21. The group video presentation was replaced by a portfolio of mini-vivas with a progressively increasing challenge (from passively listening, to actively questioning student's responses). On the grounds of this change in the assessment structure, a further and more complete evaluation process will be conducted at the end of the teaching period.

Author biography

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'Time' for increased collaboration: (re)designing online assessment under the pressures of a pandemic

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Abstract

This is a small-scale qualitative study that sought to increase our understanding of how the response to the Covid-19 pandemic affected teaching, learning and, specifically, the move to online alternative assessments. The study was conducted with a sample of lecturers from the Faculty of Health Studies at the University of Bradford. The study employed a combination of a survey questionnaire and in-depth qualitative interviews to elicit the views of lecturers regarding how they managed and implemented online alternative assessments during the early stages of the Covid-19 pandemic. Eighteen lecturers from different programme teams completed the questionnaire and eight were interviewed. The study used MS Excel to analyse the quantitative data from the questionnaire, and used the thematic analysis approach to analyse the qualitative data from the questionnaire and interviews.

The study established, among other things, that more than half of the lecturers had no online teaching experience and felt that the same assessments had to be migrated to online environment. This chapter presents the lecturers' experiences, including some of the principles for designing inclusive online alternative assessments, and we provide some practical ideas colleagues can apply to enhance their academic development and/or assessment practices.

Introduction

From face-to-face to online assessments

Beaton et al (2007) make an apt observation that universities are not immune to natural or manmade disasters, and experience with these has illustrated the importance of continuity during and after these events. Covid-19 has been extremely challenging for us all in disrupting our practice. Over a short period of time, universities made remarkable efforts to cope with unprecedented circumstances, which resulted in the move from face-to-face activities to online delivery. Arguably, for many lecturers who have always taught in a traditional classroom, it must have been an incredible challenge to adjust to teaching online and to repurpose assessments and deploy them in an online setting. For many, the experience could be synonymous to 'building the plane while flying it'. Baume (2021) asserts that: "the great leap online induced by the Covid-19 pandemic is the biggest, most rapid and most global change that higher education has ever undertaken" (n.p).

During the early stages of the Covid-19 pandemic, one of the key areas to which universities had to respond was the delivery of assessments. It became untenable to think of face-to-face and proctored examinations, and lecturers had to consider (re)-designing and moving assessments online to facilitate the continuity of student learning. Assessments constitute an integral feature of student learning (Branch, 2009). This view is echoed by Boud (2020) when he says: "assessment has a profound effect on what and how students learn" (p2). Baume (2021) makes an apt observation that: "replacing face-to-face, unseen, invigilated exams with alternative forms that will work in a variety of on and off-campus situations is a complex task" (n.p). The challenge is even bigger when this has to be accomplished over a short period of time. Arguably, collaboration takes time; yet, in the face of the pandemic, time was a constraint.

We employed an institution-wide approach to the design and delivery of online alternative assessments in response to the pandemic, ensuring the adoption of inclusive programme-level strategies (Bracken and Novak, 2019; Hartley and Whitfield, 2011). Our response took place over a short period during which programme leaders met jointly with their Faculty-Facing Hub Educational Developers and Quality Officers to discuss appropriate assessment changes. This collaborative approach was key to the development and enhancement of alternative assessments and feedback practices in response to a pandemic (Brown and Sambell, 2020).

Given that we might have to deal with these uncertainties for a long time, we feel that it is worthwhile to identify some important lessons from the experience, in order to help build more resilient systems in future. It is against this backdrop that the study at hand was designed. The study sought to increase understanding of how the response to the Covid-19 pandemic affected teaching, learning and specifically the move to online alternative assessments. Two main questions were addressed:

1. What are the lecturers' experiences of managing and implementing online assessments during the Covid-19 pandemic?
2. What lessons can we learn from the lecturers' experiences for building robust systems to ensure the continuity of teaching, learning and assessment during and after a pandemic?

Methodology

This was a small-scale qualitative study that sought to explore the experiences of lecturers from the Faculty of Health Studies regarding how they managed and deployed online alternative assessments during the early phase of the Covid-19 pandemic. The research project received ethical approval from the Chair of the Humanities, Social and Health Sciences Research Ethics Panel at the University of Bradford.

Data was generated using a combination of a survey questionnaire and in-depth qualitative interviews. Participation in each of these methods was voluntary and required consent prior to completion.

The questionnaire contained three sections:

1. Non-personal demographic information
2. An opportunity to indicate the extent to which the participants disagree-agree with statements that describe experiences of managing alternative assessments during the Covid-19 pandemic
3. Open-ended questions on what participants felt went well, what could have been improved and learnings to be taken forward.

It took up to 15 minutes to complete the questionnaire and this was emailed to all academic staff using the faculty circulation list. There was a final question in the survey questionnaire where participants could indicate their willingness to be contacted for interview. Response to this question was voluntary and handled separately to other question responses. Eighteen academic staff completed the questionnaire and eight of them agreed to be interviewed. All the participating lecturers were involved in making changes to assessments over a short period of time either as programme or module leaders.

The quantitative data from the questionnaire was analysed using MS Excel and the qualitative data from both the survey questionnaire and interviews was analysed using the thematic analysis method (Braun and Clarke, 2013). The findings are presented in the following section using key themes associated with the main research questions.

Findings and discussion

Online teaching experience

The participating lecturers had teaching experience ranging from one to more than 10 years. On the other hand, a considerable majority of lecturers had limited or no online teaching experience at all when the Covid-19 pandemic started. Tables 1a and 1b below show the lecturers' overall teaching experience and online teaching experience, respectively.

Table 1a: Lecturers' overall teaching experience

Number of years of teaching experience	Number of lecturers
1-3	3
4-6	3
7-9	3
10+	9

Table 1b: Lecturers' online teaching experience

Number of years of teaching online	Number of lecturers
None	10
Less than 1	2
1-3	3
4-6	1
7-9	0
10+	2

As shown in Table 1b, more than half of the participating lecturers had no experience of teaching online prior to the Covid-19 pandemic. This constituted a massive challenge as the staff had to grapple with (re)-designing assessments and learning how to use online tools simultaneously:

> "I was a novice with online teaching prior to Covid-19. The modules learning material was provided in the Canvas virtual learning environment, but this was delivered in face-to-face lectures, seminars and workshops."

A small group of lecturers had some experience of online teaching, hence, the transit to online teaching due to Covid-19 was not a massive disruption. However, support was still needed to help them learn how to use some of the new tools such as Zoom and MS Teams that the university invested in:

> "I have always used distance learning, and over the years this has progressed from mailing out hard copy materials to be more and more online."

Online alternative assessments

Table 2 below shows some of the responses to questions related to online assessments in the questionnaire using a Likert Scale of 1 (strongly disagree) to 5 (strongly agree).

Table 2: Participants' responses to questions about online assessments

Statement	Responses					
	SD	D	N	A	SA	Average Score
9. It was an easy task for me to provide online assessments	1	8	6	1	2	2.7
15. The online assessment was aligned to existing teaching and learning approaches	1	1	2	6	8	4.2
16. Covid-19 meant the same assessment had to be moved online	1	0	4	6	7	4.0
25. Feedback practices changed in relation to online assessment	4	4	3	2	5	3.0

As part of the emergency response, Brown and Sambell (2020) encouraged institutions and teaching teams to consider technologically simple(r) alternatives that students and staff could manage. For example, students and some staff may not have access to space, technology or indeed the skills to deliver/review live online presentations.

Some of the changes made included:

+ face-to-face exams were converted into either open book exams or assignments that were to be submitted online
+ face-to-face presentations were moved online
+ practical exams such as the Objective Structured Clinical Examinations (OSCEs) were turned into written assignments (for example, six x 10 minute stations became six written stations of 500 words each)
+ some clinical competence assessments had to be converted into written assessments as the practical assessors became busy: *"students wouldn't have opportunities to talk to practical assessors, they were pushed to the limit with increased numbers of patients in critical care areas".*

Our study findings revealed that the changes made to assessments were driven by both necessity and by compassion for students. More broadly, students at our institution were positioned front and centre of internal guidance, leading with the question: *"Where are your students in their assessment journey as a starting point?"*

Programme teams were encouraged and supported to ensure inclusivity by reflecting on the following guidance:

+ What modes of assessment are students familiar with and prepared for?
+ How will students be able to use prior feedback to help them successfully complete the assessment?
+ Is the assessment suitable for all students on the programme, those with and without learning support plans?
+ Where possible allow students a choice about how they demonstrate achievement of the learning outcomes. You can limit the choice, eg a written essay or a video essay.
+ Prioritise assessment types that are not technically challenging, do not require sophisticated software or for students to be online for significant periods of time. In this respect, asynchronous alternatives should replace synchronous assessments such as exams.

Collaborations between educational developers, quality officers and programme teams were key to the effective implementation of this guidance. For example, in deciding against essay questions that have a one-hour limit from the time of access: this would have been problematic given the unpredictability of access at home to technology and space; lack of training to be assessed in this way; and the added pressures of the Covid-19 pandemic. In such cases, more often than not it was decided to keep the question open for a period of 24 hours and to allow handwritten submissions where needed.

Arguably, the achievements made in response to the pandemic should not be thrown away. Instead, as argued by lecturers in our study:

> "the positive lessons drawn from the experience should be used to enhance practice in future".

This resonates with observations made by Brown and Sambell (2020) who consider that the Covid-19 pandemic should be viewed as a catalyst for change management to improve assessment practices in higher education. The pandemic provided an opportunity to effect changes to assessments: for instance, the replacement of unseen, time-constrained invigilated campus-based examinations that have been criticised for a long time for their lack of authenticity and challenges they present to inclusivity (Sambell et al, 1997; Gibbs and Simpson, 2005). Ever relevant is the need to always be in a position where we encourage and support "students to demonstrate mastery of learning outcomes through alternative forms of assessment" which they can select as part of the design of their programme (Hockings, 2010, 13).

Technology-related factors

The lecturers' prior knowledge and/or experience of technologies was significant when making decisions about online alternative assessments. Table 3 shows the responses to some of the questions focusing on technology and support in the questionnaire using a Likert Scale of 1 (strongly disagree) to 5 (strongly agree):

Table 3: Participants' responses to questions about technology and support

Statement	Responses					
	SD	D	N	A	SA	Average Score
7. I was familiar with the different tools in Canvas for the delivery of online assessments during the Covid-19 pandemic	4	8	3	3	0	2.28
8. I received all the necessary support to access and to know the basics of how to use tools in Canvas to deliver online assessments	3	3	7	3	2	2.89

Our study showed that a considerable majority of lecturers were not familiar with the tools in Canvas (the university's virtual learning environment) and some staff were unable to access training sessions for a variety of reasons:

> "Many staff were extremely busy over the period so attending training was very hard to do."

On the other hand, lecturers felt that it was overwhelming to be introduced to different tools over a short time:

> "It takes time for people to become confident in using them and it takes time for people to feel that they can teach and support students and when it's being rolled out at pace it's difficult to keep up."

In addition to providing a variety of tools, it is important to have a greater investment in the number of support staff because inadequate technical support undermines the value of the available learning technologies.

Our study highlighted the importance of ensuring inclusivity in the way academic staff are supported. As shown above, it was difficult for some lecturers to attend the scheduled workshops due to either teaching commitments, family and/or other social obligations. Recording the sessions and creating guides and resources that can be easily accessed by staff in their own time is necessary.

Communication

Our study established that good communication at different levels was vitally important in the process of rapid change. A considerable majority (71%) found it difficult to communicate with their team members. Interview data revealed that some programme leaders were unable to reach out to colleagues who were either on annual leave or had joined the frontline support. The lecturers applauded the way the university senior management were able to use different ways to communicate key messages. One lecturer said: *"The executive meetings, emails and 'Ask Me Anything' events were useful".* However, there was also a feeling that, at times, that information was late, and colleagues had to work retrospectively: *"It was difficult to await a consensus in relation to what to tell students".*

Challenges and opportunities

The challenge of how to offer inclusive, accessible, valid and reliable assessment alternatives predates the Covid-19 pandemic (Hockings, 2010). Despite progress made, for teaching teams to now achieve this as part of an emergency response was a significant challenge. This also emerged in our data when lecturers were asked what they found difficult during the move:

> "How to meet needs of students with learning support plans, invigilate online exams and how to align exams with Canvas grade centre for easy marking."

The other main challenge faced by the participating lecturers was the increased workload. For example, the change of OSCEs into written assignments resulted in an excessive amount of marking of written assignments:

> "Increased workload and lone working was difficult."

> "Transferring the interactive face-to-face content into a less student reactive environment and making this as inclusive as possible gave me a lot of work to do."

In some cases, some lecturers felt that their autonomy was eroded due to limited or no time for consultation: *"I found being told what I could do rather than what I wanted to do difficult but I was over-ruled."* There were also some IT related issues that lecturers had to contend with: for instance, they had to embrace new tools and give up on some of the familiar tools due to decisions made at senior management level regarding licensing issues.

> "I was frustrated not to be able to use the technology I wished…"

> "There were several IT access issues for students, making students and myself anxious during the assessment."

The pandemic revealed how *"technology has added a new digital dimension to inequality"* (Seah, 2020, 127). Not all students had access to resources to support online learning and assessment such as laptops and broadband at home. Other factors such as home environment issues, including limited reading space, were also evident. To address digital poverty, some lecturers had to intervene to help their students get university laptops to enable them to continue with online learning and assessments.

When designing alternative assessments, it was also important to bear in mind that students have diverse digital capability, hence the need to provide technical support (Margaryan et al, 2011). Despite the existence of challenges such as how to ensure inclusivity in the designing and implementation of online alternative assessments, through technology use, imaginative thinking and flexibility, it is possible to continue teaching and assessment activities in a pandemic situation.

Conclusion

The designing and implementation of online alternative assessments during the pandemic was achieved over a short period of time through effective communication, flexibility and collaborative effort. The technology infrastructure was a key factor and lecturers needed support to identify inclusive online alternative assessments and tools to use. The whole experience was described as overwhelming by lecturers who faced time constraints and increased workloads. Some challenges were experienced, including how to manage and implement online assessments while ensuring academic integrity and attempting constructive alignment (Biggs and Tang, 2007). It is important to consider effective ways of supporting academic staff to design and deploy online assessments in an inclusive manner, especially given the diversity of students and other factors such as unequal access to resources to support online learning and assessments.

Recommendations for practice

Based upon our findings, we would make the following suggestions regarding the designing and implementation of online alternative assessments:

+ It is important to 'design in' the use of technology in future programme re-design or reapproval by exploring and including alternative assessments as standard.
+ Any future work on (re)designing of assessments can benefit from good communication and collaborative effort.
+ Adopting a programme-level approach and using synoptic assessments helps to reduce overassessment of students as well as staff workload by avoiding repetitive assessment of the same learning outcomes.
+ Educational and digital developers should record workshops and create online resources and guidance that academic staff can easily access in their own time, rather than relying on delivering time constrained synchronous workshops.
+ Programme teams should be encouraged and supported to identify simple, valid and reliable inclusive alternative assessments.

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Maintaining 'incidental' feedback in synchronous online learning environments

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Abstract

This case study explores how we incorporated the use of dialogical feedback in a fully online course in a large compulsory business master's degree in Australia during 2020. With a move to online learning environments, a common concern is the loss of interaction between teachers and students that offer opportunities to provide feedback to students on their learning and for students to provide feedback on their experiences of learning in the course. Using easy-to-access technology 'hidden in plain sight' we reimagined how incidental interactions could be achieved through multiple sources to provide channels in which feedback both for and on learning could occur.

Importantly, students who had differing learning preferences as well as those with physical disabilities were benefactors of this approach. The assessment results at the end of the course showed that overall student outcomes were similar to previous cohorts delivered face to face, indicating that we were able to maintain similar learning experiences despite the disruption caused by the move to online learning due to the pandemic. We offer a number of practical and time efficient ways to create incidental interactions in a fully online environment.

Introduction

The Covid-19 pandemic has forced many universities to move to online delivery and assessment. Educators across the globe have had to re-evaluate how we deliver content, the design of assessment (such as shifting away from invigilated exams) and how to support student learning. Our own response to this need to move teaching online has provided a 'real life' experiment in which to reflect on elements of our professional practice and the impact it has on student learning. A common concern voiced about online classes is the loss of the incidental interactions with students – for example, while waiting for class to start – that provides opportunities to build rapport, and where students may ask questions about, or seek feedback on, assessment tasks (Brinthaupt et al, 2011; Ratliff, 2018, 2019). With the move to a fully online learning environment, there was a need to ensure those moments that occur in a 'face to face' teaching environment were not lost or forgotten given that they provide opportunities to engage in dialogical feedback (Steen-Utheim and Wittek, 2017), which is an important mechanism to support student learning. This case study explores how we facilitated dialogical feedback interactions with students in a fully online environment.

As many have observed (Bain, 2004; Buskist and Saville, 2001; Brookfield, 2015; Brinthaupt et al, 2011; Ratliff, 2018, 2019), building rapport with our students encourages learning by building their confidence and motivation to learn. Lang (2015) observed in his own practice that the minutes before class formally commences are crucial in creating a positive learning atmosphere for students. These moments can be used not just to build rapport or interpersonal connections between teacher and student but can also be seen as opportunities to assess student 'understanding' of both course concepts and formal assessment requirements (through the questions they ask) as well as providing support and feedback around these tasks. The volume of questions asked about specific tasks also provides important feedback to the educator on the clarity of the instructions and support already provided to the cohort.

Feedback can often be perceived, by both faculty and students, merely as the summative comments provided when grading an assessment item (Merry, Price, Carless and Taras, 2013; Yang and Carless, 2013). This formal feedback is commonly directive, uni-directional and corrective in nature and occurs at a single point during the learning process. In contrast, feedback can also be ongoing, two-way, incidental and informal. This type of feedback is designed to support learning broadly (that is, beyond just what is formally assessed) and encourages engagement. This 'dialogical' approach to feedback has been gaining momentum as an important approach to support student learning. Carless (2013, 90) defines dialogical feedback as:

> "interactive exchanges in which interpretations are shared, meanings negotiated and expectations clarified … dialogic feedback is facilitated when teachers and students enter into trusting relationships in which there are ample opportunities for interaction about learning and the notions of quality."

Dialogical feedback occurs dynamically in the teaching environment and focuses more holistically on the student as learner. Importantly, it can be bi-directional. Firstly, students provide feedback on their level of understanding to the teacher through the questions asked or by the teacher reading the non-verbal signals of students (the twitches, fidgets and facial cues and clues – or worse, phone scrolling) providing information on their level of engagement, interest and/or understanding. In turn, the teacher provides feedback to the student on learning in real-time, answering questions to clarify understanding and meaning, as well as reaching out to the student who appears lost and/or disinterested during class discussion. With the move to online teaching, both teachers and students lost many of these opportunities for informal and incidental feedback, potentially losing an important element of their learning environment.

The case study

This case study is based on a large compulsory postgraduate coursework (as opposed to research) course comprised of mainly international students who are culturally and linguistically diverse (CALD). Prior to the pandemic the course had been taught face to face with a combination of large interactive lectures (approximately 150 students), and small activity-based workshops (25 students). Over the term, we would collectively build a learning environment in which there were many opportunities to engage in dialogical feedback to support students' learning. Our approach to learning in this course was broadly defined to include the course material and metacognition by the students themselves as learners, as well as learning to adjust to life in a new city/new country. The move to fully online learning due to the coronavirus pandemic in 2020 presented several challenges, not least how to maintain a highly engaged and interactive learning environment mediated through technology. The possibility of losing the interactive and engaged learning environment in this scenario had the potential to reduce student learning and satisfaction.

As our students are typically taking their first course of study in the programme and are largely international, this cohort seeks continuous reassurance on their progress. We encourage students to participate and contribute to class discussion, facilitating a peer-learning environment in which their learning can be affirmed or redirected by both peers and by teaching staff. This dialogic feedback (Steen-Utheim and Wittek, 2017) occurs informally and frequently when classes are held face to face. In addition, the role of this class is underpinned by assisting students to create a community with each other and feel part of their study cohort for future and other classes. Therefore, the feelings of isolation and disconnection being discussed more broadly as a concern with online learning in a pandemic increased our concern given the cohort (Salmi, 2020; Mushquash and Grassia, 2021).

Enablers and constraints

In the move online we sought to maintain interactive feedback practices but were faced with various challenges such as the diaspora of our students; now located around the globe, across numerous time zones and with varying levels of technology access, literacy, learning and efficacy. Our dilemma was how to engage and keep students motivated and open to learning. Our approach had to consider all these concerns and provide those with different learning preferences and physical disabilities equal and easy access. The immediacy of addressing these problems, given the impact of physical distancing measures, border closures and campus lockdowns, meant we had to reimagine and recreate the learning space while continuing to provide incidental feedback.

Given the time constraints imposed when physical distancing measures were introduced and classes were directed online, we turned to readily available technology seeking to exploit tools 'hidden in plain sight'. That is, technology platforms that we all had some familiarity with but which we may not have been exploiting all of their functionality in a face to face teaching environment. For example, we looked to find capability within technology platforms that were already in use such as Zoom, Teams, Blackboard Collaborate and Google Classroom as well as interactive tools such as Socrative, Kahoot or Mentimeter rather than seeking new tools or technologies.

There are a number of reasons we needed to use what was available, including low barriers to entry for our students who may have poor internet access in terms of bandwidth and stability, as well as access restrictions due to firewalls and various country limitations. Some students may not have their own computer and may be using public facilities or learning via their phone. We also could not be certain that every student would be a 'digital native' or technologically savvy; our solution needed to be easy for both the teaching team and students to learn and upskill in its use. As Moore (1993) suggests, interaction must consider the technology too. From an informed teaching perspective, ideally it had to offer some data on which to inform our practices going forward because, as Mandinach (2012) states, gut feel is not enough to act on.

Engaging students through incidental feedback

Armed with several easy-to-use off-the-shelf technologies we were able to create an interactive learning environment through multimedia and multi-modal information sources. As Blackboard Collaborate is a purpose-designed platform for teaching and was integrated into the learning management system (in our case Moodle) we choose that platform for delivering our synchronous teaching classrooms, making more extensive use of the data analytics it could provide and the embedded teaching tools on the platform that are rarely used when delivering in more traditional face to face course offerings. These included, but were not limited to, data insights of who logged on, dropped off and the strength of their connection; polls to check understanding and sentiment on topics; breakout rooms for discussions. The chat function provided many opportunities to engage and provide feedback both ways as well as build rapport and assess understanding.

Using polls

Tools such as polls and breakout rooms were implemented to engage students during class time and replicate online polling and 'turn to your neighbour and discuss' activities used in the face-to-face classroom. Polling provided feedback quickly as to who was actively engaging in the class. We used the polling activity to measure their understanding of concepts and materials; for example, asking students to provide a response to Heinz's dilemma (a scenario used to explore 'moral development') enabled us to use the poll results as feedback on student understanding, adjusting our delivery in real-time to revisit material or emphasise important concepts that were being poorly understood. In addition, we also used the polls to reach out to students and receive feedback about the 'mood' of the class, with questions asking "How confident are you to …", where the answer choices included "I'm lost", "I'm struggling" and "I'm confident", enabling us to support our students in their learning. This meant providing extra videos or more class discussion or reallocating time to focus on their needs. The polling data was saved, and accessible after class, providing the opportunity to follow up with individual students who had told us they were lost or had not participated. By connecting with those who were silent or had expressed concerns, we were able to create deeply personalised learning and feedback experiences for even the most reticent student. It was informal feedback provided by the students, but our follow-up actions were data driven. We deliberately used the polls for contemporaneous feedback (a 'pulse check') but they were merely one method.

Using the chat function and emojis

Encouraging students to use the chat function in Blackboard Collaborate provided a safe platform for students to connect and contribute, including those who may have been less eager to speak up using video/microphone, or who may be dealing with bandwidth or connectivity issues. The chat function provided a space and gave voice to the quietest students and those who needed more time to construct their answers and thus were reticent to contribute verbally to discussions. The chat box had more functionality as it came alive, effectively becoming a 'live feed', presenting a real-time window into their understanding and engagement with the material. It could operate during the whole class, giving the students time to think and answer while providing real-time feedback that could be incorporated into our teaching. The student could construct an answer and gain immediate feedback from us and their peers. The contributions by students to the chat box became feedback for us about their level of understanding and gave us insight to our teaching efficacy. Once again it provided a means to adjust our delivery in real time to pause and further explore or re-explore material where students appeared to be struggling to make sense or meaning. It also allowed us to pick up interesting themes and examples being provided by students to enhance and deepen their understanding of the topic and its application in 'real life'. There was an added benefit for teaching online: the chat function gave everyone a voice. For students who were reticent to contribute to discussions verbally, the chat function provided a more welcoming mechanism with which to contribute their thoughts and ideas. With time to construct an answer, those who are more introverted in their thinking had time and space to contribute.

While time to construct answers was important for the students, we needed a quick and efficient way to provide feedback on the 'feed' as this was occurring simultaneously to teaching. This 'paved the way' for emoji use throughout class by both teacher and student. Emojis provided an easy-to-use form of feedback during class when students used the chat box. Certain emojis became a language of feedback for the class: we deployed gold stars for excellent or exemplary answers; while the 'speaking head' was given as a 'talking up' award for providing input or a response that indicated an attempt but not yet exemplary answer. Students also started to provide emojis as a means of feedback to us in the form of 'likes', and various 'faces' which told us their sentiment on the usefulness of a concept to their experience or level of understanding after a discussion when a formal poll was not conducted.

Recognising that our feedback should be as specific as possible, further differentiation was made based on the quality of the answer provided by the student in the feed and 'a constellation of stars' was introduced for answers that indicated depth and consideration or application at a distinguished level. However, every student who was bold enough to contribute their thoughts received an individual acknowledgment and feedback emoji to acknowledge their participation. This simple form of feedback and recognition tells the student we see and hear them. It is an easy method to provide feedback and encouragement and enables us to redirect effort as needed quickly while adding a human touch.

The humble 'gold star' is loved by our students: even the more reserved students will request a star if it is not forthcoming. This does not infantilise the process, instead it becomes an incidental real-time feedback process. Like any 'reward system' it acts as a motivation tool as well. More recently, as students built a community of learners, 'coffee' emojis were awarded to those who support, encourage and facilitate learning among other students in their answers. These coveted coffees symbolise a learning community of practice and recognise additional expertise as well as encouraging students to learn from each other while symbolising to the cohort the expertise provided. This has assisted other students to learn and also build efficacy with the materials. Informal feedback from our students showed no concerns in emoji use and formal end-of-course feedback from our students told us clearly that students did not merely enjoy the live feed, polls and emoji rewards, but found these to be important components of incidental feedback and helped them keep focused as learners during the term.

Using Socrative for greater impact

In seeking even more depth and insight than yes/no or multiple-choice answers or feeds, we incorporated an external platform, 'Socrative'. The platform provides the ability to create a series of questions and activities prior to class, which are then incorporated into the class at pre-determined points. As students responded, we would synthesise and feed back to students the emerging themes from the contributions. This process also enabled us to develop insights into student preparedness and comprehension. With no international restrictions to access, and easy phone log in, Socrative was a perfect complementary platform for a globally diverse cohort. We would start the class by asking "how are you feeling?" and expand to "if you could ask us any question you would ask …" enabling us to quickly understand the 'temperature' of the room. From excited to tired and anxious, they told us – and told us loudly – what was going on for them, fostering a learning environment in which they felt connected, acknowledged and cared for at a time of great dislocation globally.

We then used the data from Socrative to generate word clouds and communiques that directly spoke to what the students expressed and drew them together as a cohort, building a learning environment in which feedback was constant. The answers also informed our practice in real time with their concerns or comments prompting directing the structure and approach that we would adopt in class that day. There was an additional outcome inasmuch as it enabled us to engage in dialogical feedback on student progress and understanding as we taught. The questions they asked told us whether the basis for the question was lack of information from a teaching perspective, lack of understanding from a student perspective, or lack of technical ability or access to the materials. Thus, by looking at what had been accessed or if something communicated had been unclear, it became another means of feedback and data to act upon.

The results indicate impact

Despite the considerable disruption to the learning environment and their lives more generally during the pandemic, the dialogical feedback we introduced into this online environment has enabled us to provide feedback during class just as we would have in a face-to-face environment. Data tells us that over 80% of students who are online join in the polls and the emoji feedback processes; when students have the opportunity to provide more comprehensive responses using Socrative it can go as high as 95%. Formal feedback by way of course evaluations, including qualitative comments, show that students enjoy the interactive feedback, helping them to stay motivated while signalling what is important in the course. They also told us they felt listened to and had a means to speak up in class. It appears these approaches are appreciated by the students and, as formal assessment results remained consistent with previous face-to-face cohorts, this approach to online dialogic feedback is as successful as informal face-to-face interactions in supporting student learning.

Considerations for practice

Students value incidental feedback from their teachers, perhaps even more so in a fully online environment where many of the visual cues and clues are removed. Incidental feedback through a dialogical process is possible in a fully online class through adapting how teaching technology is used. As an enabler, technology requires each one of us to consider how the tools can be adapted to create interaction with the students in real time, just as occurs in a face-to-face classroom. The technology deployed must be simple to use for both the teacher and the student and enable the student to build their learning efficacy. In doing so the incidental feedback must focus on building their educational capital. For teachers, getting this feedback enables us to adjust and respond to our students and their needs in real time.

Feedback is more than words and actions and our use of emojis has evolved over the time of the class. In building your emoji feedback it should represent your personality and that of the class. Just as you have feedback banks of words you might use when grading an assessment, you can build a set of reward emojis that can be deployed quickly in class. When first using them, it can be valuable to name them as you award them as this creates a type of feedback 'shorthand'. Students enjoy fast feedback and 'a picture paints a thousand words' so give emoji feedback frequently and freely – a virtual cup of coffee costs nothing but often means much.

In the online environment, we should also seek feedback more regularly, such as using a poll before moving onto a new concept but use student language such as "I'm confident" and "I'm lost" as this will encourage an affective response rather than an intellectual one and brings the notion of dialogical feedback to the forefront of every teaching interaction.

Lessons learnt and conclusion

The disruption caused by the Covid-19 pandemic has resulted in what was, for many, an 'overnight' move to online teaching. There was a real possibility in the disruption caused that many of the less formal opportunities to provide feedback to students, and to receive feedback from students, that are present in our face-to-face classes would be lost in the move to online delivery. As shown through our case study, it is possible to rebuild at least some of these important components into an online course. Technology allows us to provide dialogical feedback in a fully online environment, which is just as valuable to our students in building their learning capability as formal feedback. We have provided a number of examples of how we can introduce dialogical feedback into online learning environments, both to support student learning as well as a means of recreating that 'two way' feedback loop between teacher and student that may have been lost through the move to online. We suggest that introducing even one of these feedback practices will engage your students and also assist with developing their learning.

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Introducing the TEDM principle for improving written feedback

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Abstract

Recent discourse on assessment literacy is strongly supportive of dialogic practices, without addressing the concomitant challenges posed by the realities of workload, high student numbers and sustainability. This paper presents the findings of a small-scale qualitative study exploring the views of lecturers and students on the effectiveness of a pragmatic model of written feedback using a 'showing not telling' approach. This is a novel synthesis of two paradigms – formative and summative – to form a new protocol using descriptive feedback within a peer-tutor framework. Key to its function is the use of modelling, a method of 'showing' students how to improve their work at the formative stage using the TEDM principle: tell, explain, describe and model, as opposed to 'telling' them how to improve it on assignment completion. Key findings are that the model is effective with high numbers, it is positively received by students, and is sustainable as it is now in its fourth year on a Master's course with more than 100 learners.

Introduction

In a project report by Barrett and Barrett (2008), nearly 50% of staff found their workloads unmanageable, a point reinforced by Graham (2014), and extended by Minassians (2014), who considered the competing demands of teaching and research. The focus of this paper is on the effectiveness of a 'feedback as showing' model of dialogic written feedback to large cohorts for whom purely dialogic feedback was 'impeded' (Carless, 2016, 4) by staffing/workload levels, by reframing it as a process leading to a summative outcome. While Winstone and Carless (2020) state that a dialogic mode is 'possible' with large cohorts, the issue of practical sustainability remains. A paper by Nicol (2020) goes further by calling for a seismic shift in feedback, arguing that what is most important in determining what students learn is comparisons against information in the social and material environment rather than the planned and intermittent comparisons they make of their work against comments from teachers or peers. This argument, while compelling, goes beyond the scope of this paper, but will form the basis of further suggested adaptations to the model described in the recommendations section (below). The context of this study is within two Master of Education (MEd) programmes (Professional Practice and Teaching English to Speakers of Other Languages, TESOL) at the University of Glasgow.

Research Question

To frame the study, a survey of the extant literature considered the key question: what are the common issues in communicating feedback to students and how can they be offset in written-only feedback?

From the literature, feedback is an interaction between teacher and student best conducted dialogically, but which often defaults to the written mode in high-cohort programmes. A further challenge lies in the tension between workloads and the ability to introduce and/or maintain such dialogic modes, as identified by Dixon, Dixon and Scott (2007, 12):

> "When the pressures of workload increased…academics were less likely to source new content and preferred to rely upon past lectures and tutorials."

In either form, the interaction between student and teacher aims to inform both about learning gaps and "alter the gap" (Sadler, 1989, 121) between current ability and future targets. Activating feedback entails the student taking feedback from external sources (teacher or classmate, for example) and internalising it for use in later assignments (Nicol and Macfarlane-Dick, 2006). Feedback protocols aim to do five things according to Nicol (2010): decode the feedback; internalise it; compare it to the student's own work; make judgements about the quality of their work and make improvements in future work.

However, summative feedback is consistently rated unfavourably by students (Gibbs, 1999), in contrast to its formative counterpart. A 2008 study found that "in England, 39% of students reported that teacher feedback was not sufficiently detailed, 44% that it did not help clarify things they did not understand and 44% that it had not been promptly delivered" (Nicol, 2010, 11). Thus, while feedback helps with aspects such as spelling and grammar, it lacks content-specific direction on how to improve, allowing for more space to give encouraging comments rather than anything with which the student can work (Nicol, 2010).

The literature also points to consistent misunderstandings of the purpose of formative feedback while a possible lack of understanding among some learners about how to address feedback is also common (Hounsell, 1987; Ivanic, Clark and Rimmershaw, 2000). A study by Weaver (2006) found four overarching issues: generalisations or vagueness; omission of guidance on how to improve; focus on negatives; disconnection from assessment criteria (making internalisation for future use challenging). Indeed, a study conducted by Higgins, Hartley and Skelton (2002) also found that only 33% of respondents understood the assessment criteria. Equally, students lack access to the 'tacit knowledge' of their tutors and, consequently, can lose faith in marking quality. Conversely, lecturers find providing effective feedback labour intensive and cognitively demanding, which is further amplified by attention to the tone of feedback.

A central concern, though, is the 'internalisation gap'. Peer review has been suggested as a possible bridging mechanism to provide learners with an experience that mirrors the lecturers', which means that the student must possess the knowledge of an assessor to understand the way feedback is generated. Peer review, then, as proposed by Boud, Cohen and Sampson (2001), represents a possibility to bridge that gap, although any attempt to implement a 'showing not telling' model must

encompass workshops on how to peer review to alleviate concerns commonly found in the research, for example, in the guidelines from the Centre for Teaching Excellence at Waterloo University, Canada (University of Waterloo, 2021):

> "To teach students how to provide useful review comments…is essential."

The challenge for peer review is to show students how to improve and internalise feedback rather than to passively receive it. Research by Gibbs (1999) and Nicol (2010) suggests that student concerns are deep, and that any such system should take these into account. Feedback as telling does not fully engage students in the way that is necessary to develop the kind of internalisation skills they need to properly apply the comments they receive, therefore it has to be modified considerably to develop these skills in written-only feedback, which we attempt in our model.

Materials and methods

In this section, we describe the 'showing not telling' model created in response to the concerns found in the literature, and evaluate its effectiveness. As such, we hybridised formative and summative assessment by providing feedback from both student peers first and then tutors on the first 1500 words of a 4,000 to 6,000-word assignment using the Aropä (2018) platform. This platform is a local resource developed within the Psychology department at the University of Glasgow.

Key to the success of the model was the adoption of a system to provide descriptive versus instructional written feedback. This is designed to show students how to improve their future work using the TEDM principle, below, rather than by telling them what needed to be done:

Tell the student that some aspect of their work is either effective or ineffective in meeting the assessment criteria

Explain why it has been effective or ineffective

Describe how the student could do better either in a later draft or in another assignment

Model exactly how the student could do better by showing them examples of how aspects of their work could be improved.

The 102 students first undertook assessment literacy CPD. This involved a feedback template with guide prompts and grade descriptors aligned to different grade bands prior to the 'live' feedback required of them as part of the formative assessment. They were then invited to offer feedback as part of 10 feedback 'hubs' (10 peers and 1 tutor) on three sample assignments. To further support them, they were given access to the original tutor feedback to support the development of the 'tacit knowledge' identified by Carless and Boud (2018), which is acquired through observation, imitation, participation and dialogue (Bloxham and Campbell, 2010).

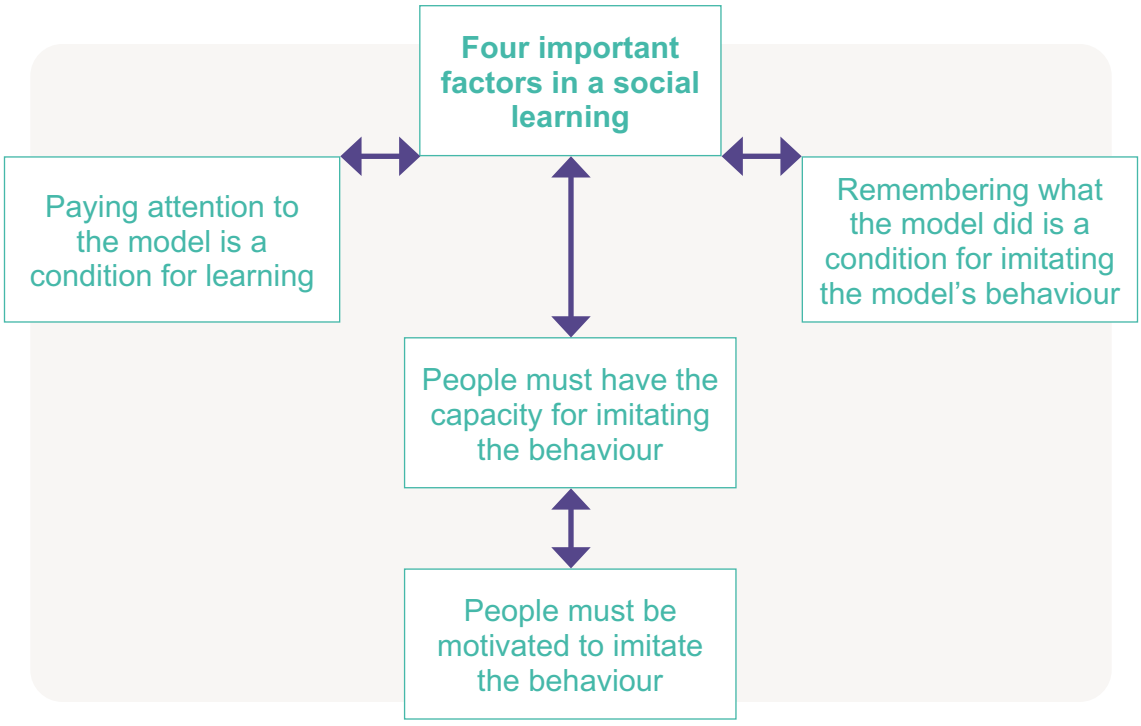
In the 'live' aspect, students provided peer feedback. This was then followed by lecturer feedback, which largely reinforced peer comments and highlighted any essential elements not yet covered. Peer reviewers and lecturers were also asked to provide an indicative grade, based on students acting on

the feedback provided. Given the front-loading of feedback from the end of a piece to the formative stages, on final submission the summative feedback concentrated on a brief comment to justify the grade awarded.

Feedback on up to three positive trends in the assignment was required. The underlying principle was to motivate students by firstly highlighting positive trajectories. This also focused the assessor's attention away from a search for obvious flaws, which is a common way to begin feedback, and is also less demanding cognitively. This is even more likely to happen if an assessor lacks CPD in the provision of feedback beyond the common practice of providing instructional guides only.
Second, feedback was sought on up to three areas which had the potential to be developed, to model a more critical approach. The key component lay in this modelling and so the conventional instruction, for example, to apply greater levels of critical awareness, was replaced by a demonstration of what needed to be done to 'show' the student what to do to achieve the desired outcome. Within this framework, the requirements were exemplified or modelled to make the internalisation process easier for the student and to aid their retention skills. Lastly, students were made aware of (up to three) omissions or trends in their assignment that were incongruent with the assessment criteria. In this feedback paradigm we hoped to address, in addition to the first three factors (Diagram 1) in Bandura's observational learning, the most important factor of all – reproduction. This is the ability not only to learn new skills, but to reproduce those in the peer's own work.

The concept of modelling stems from work by Bandura (1977) on social learning theory and the principle of social constructivism (Vygotsky, 1978).

Diagram 1: Four important factors in social learning



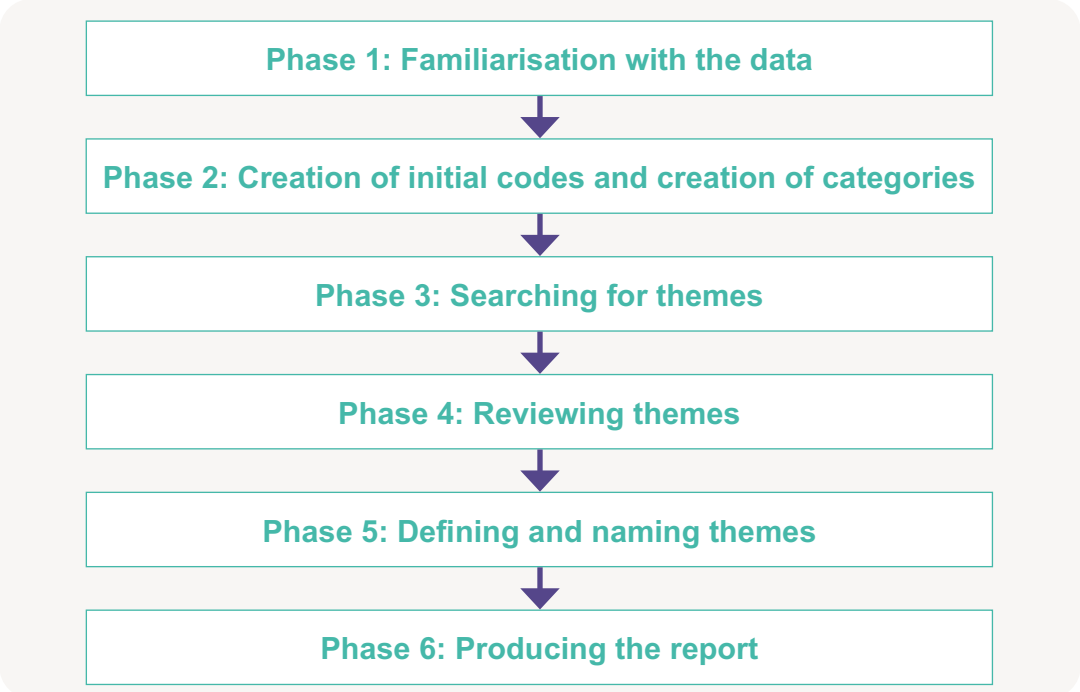
One of the key challenges of converting feedback into action is that students do not act on instructional feedback because they do not know how; there exists a cognitive gap between the expectations placed on them by the feedback comments and their ability to convert those into appropriate action in a later draft. Modelling the skills absent from the assignment avoids 'telling' a student what to do to improve their work and instead 'shows' them how to do this, thus closing this cognitive gap.

This model was implemented first on the MEd Professional Practice programme and then extended to two courses on the MEd TESOL programme (Language, Assessment, Proficiency and Feedback and Course Design and Practice). Following the completion of the course assessments, eight focus groups, each comprising three students, were established. Each focus group also contained a tutor to moderate the discussion. The focus groups were drawn from the three courses, which were taught by three different tutors. The aim was to solicit views of the process, to identify the perceived benefits and limitations and to make recommendations for a feedback literacy tool for use with staff and students.

Methodology

Following transcription, a variation on the six-stage model of thematic analysis by Braun and Clarke (2006) was used as a paradigm followed by all four researchers throughout the process, illustrated below in Diagram 2.

Diagram 2: Thematic analysis by Braun and Clarke



Conventionally, the formation of thematic sets is described inductively or deductively. The approach, while mainly deductive (to test this model), also included inductive elements (examining the hypothesis that current feedback protocols had pitfalls).

Following transcription, we carried out step one, familiarisation with all data. Steps two and three, initial coding and generation of themes, were discussed as a team to establish our shared understanding of how to apply the model. One team member was asked to analyse one transcript to applying initial coding and the initial themes (step four). Steps five and six were conducted as a group, but using the pattern established in steps two and three and so transcripts were divided among the team who produced their analyses, which were then critiqued by the whole team in order to generate step six. This final stage was completed by the team member who carried out step four. We found that a number of key themes emerged from this process: Confidence, Emotion, Engagement with Criteria, Engagement with Feedback Usefulness, Objectivity, Opportunity, Motivation, and Unexpected Outcomes.

Themes and findings

The data points to feedback enhancement practices via peer-tutor review processes and highlights the opportunities to develop effective practice further. Based on our analysis, we found that:

1. Participants reported that modelling helped them to internalise (and convert) written feedback into feed-forward.
2. Alignment between the assessment criteria and comments made it easier to enhance specific responses to each criterion.
3. Feedback helped students to improve later drafts and grades in the majority of cases, which was highlighted as a major strength of the model.
4. The hybridisation of formative and summative assessment frameworks supported students through the process of constructing their assignments in a staged manner.
5. The nurturing of relationships was found to be significant in motivating students to engage actively with feedback.

Positive relationships were established more effectively within contexts in which students felt that assessors were being supportive. This atmosphere was engendered by following the order of feedback presented in the model, beginning with the positives to create a supportive initial contact. This was reinforced by the provision of exemplification that encouraged the student to return to the assignment with a clear idea of how to improve on the first draft. Finally, obvious issues were identified which prevented their escalation into highly problematic issues which impinged on the grade awarded. The key to all of this, however, was word choice and tone. Supportive and encouraging word choices tended to produce better results than negative comments provided by assessors who had not considered the potential impact on those being assessed.

Recommendations

1. The hybridisation of formative and summative assessment practices allied to the recalibration of feedback to a stage earlier in the writing process creates the opportunity for students to improve a piece of work prior to summative assessment. This increases the possibility of both improved outcomes and student satisfaction. As such, its wider use should be considered.
2. As the internalisation gap and the ability for students to self-regulate has been shown to be problematic, initiatives that directly address the issues contingent upon the development of such skills should be used.
3. Modelling should be used to support students to improve the quality of a draft of their work in order to address point two, above, and to close the cognitive gap between feedback expectations and actioning those in further drafts.
4. Students (involved in peer reviewing) and lecturers need to be supported in developing their feedback literacy. Consequently, there is a need for a resource that offers more than a checklist of guidelines or rules to follow when giving feedback. Academic staff and student peer reviewers require support in shifting from 'telling' to 'showing' students how to improve their work via modelling good practice. This cannot be achieved using instructional models of feedback, but could be supported via descriptive models. This training could be promoted in two ways:

+ on the programme level beginning with undergraduate year 1
+ on the course level to reinforce the skills required

This could have the effect of supporting student confidence in deploying peer assessment and also add to their resilience when receiving peer review themselves. Another positive benefit would be the development of higher quality feedback from both peers and tutors as the process becomes more widespread.

Limitations

1. The model described in this paper is a pragmatic compromise between the desire to improve current feedback practices and to contain those suggestions within current curriculum parameters. So, some change, but not too much.
2. To fully realise the affordances of dialogic feedback, it is necessary to alter current workload models to reflect the time demands of feedback research and encourage academics to apply these principles in their own teaching.
3. Peer reviews can be viewed by students as an addition to their academic workload.
4. Marking/reviewing timeframes become tight in this model.
5. Some students wished for detailed feedback at the end of the assignment as well as at the 1500-word formative stage, which has implications for workload.

Top tips

+ Provide feedback as part of the formative process of assignment writing, ie while students still have an opportunity to influence their summative grade.
+ Help students to peer review effectively by supporting them through the process. A CPD resource is now available on request from: william.mcguire@glasgow.ac.uk
+ Indicate (up to three) strengths first. Then indicate (up to three) areas that could be developed. Finally, identify (up to three) areas requiring immediate attention (if this is the case).
+ Model the three areas to be developed. Demonstrate by example the kind of response you are seeking rather providing instructions.
+ Make the process visible and comparative. Encourage students to compare their work with that of others and then use the learning to improve their own work.

Author biography

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Good practice guidance for conducting online academic integrity panels

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Abstract

The Covid-19 pandemic has presented challenges for assessment practices within higher education. One such challenge has been conducting online student academic integrity panels to consider cases of plagiarism, collusion, contract cheating and other forms of potential misconduct. This paper outlines the challenges faced when conducting online academic integrity panels, specifically those linked to institutional regulations, communication platforms, examining evidence, student engagement and providing appropriate support to students. Practical solutions to these issues will be considered. Finally, analytics based on the author's experiences of coordinating more than 500 academic integrity panels, including around 80 online panels during one year of Covid-19 related restrictions, will be considered. Ideas for continuing good practice and addressing concerns related to equality, diversity and inclusion will be discussed.

Introduction

The concept of academic integrity is multifaceted and interpreted in different ways internationally (Bretag, 2020). A concise definition of academic integrity, relevant to the educational context of the UK, is given as:

> "Academic integrity means acting with the values of honesty, trust, fairness, respect and responsibility in learning, teaching and research. Universities consider that it is vital for students and all staff to act in an honest way and take responsibility for their actions and every part of their work" (Universities Australia, 2017, 4).

Historically, some academic institutions approach issues around academic integrity by simply prioritising harsh penalties for suspected infractions, the rationale being such penalties act as an effective deterrent to students (for a review, see McCabe, Butterfield and Trevino, 2012). However, this approach has often been less than successful in addressing the issue and fails to recognise the reasons for infractions, such as limited knowledge and skill development (Twomey, White and Sagendorf, 2009). More recent work has focused on fostering academic integrity through helping students identify areas of their academic practice that require development and supportive training, ensuring academic institutions focus not on how misconduct can be stopped, as this task may be impossible, but instead ensuring students are learning in an effective manner and have a clear and critical understanding of academic integrity (McCabe et al, 2012; Pecorari and Shaw, 2019; Bretag, 2020).

A common perception is that cases of plagiarism, collusion, contract cheating and other forms of misconduct have recently increased in frequency (Lancaster, 2020; Newton, 2016). In particular, concern has been raised over the electronic educational resources available to students and the increasing availability of resources designed to aid students avoid plagiarism detection (Kauffman and Young, 2015; Olivia-Dumitrina, Casanovas and Capdevila, 2019).

Given the significant and continuing level of academic integrity infractions it is necessary for all higher education institutions (HEIs) to have robust policies and procedures in place to address this issue (Morris, 2016). Part of this involves running effective investigatory panels to consider potential cases of student misconduct and to allocate appropriate penalties. The Office for the Independent Adjudicator (OIA) provides a summary of the guiding principles that should drive formal investigation panels (OIA, 2021), which should include: providing clear and accessible information on the procedures to be followed; providing clear information on the issues and associated evidence to students; identifying appropriate sources of support; appropriate training should be provided for panel members; considering and addressing potential issues of bias; and providing appropriate information on the appeals process.

The disruption caused by the Covid-19 pandemic has necessitated the online delivery of most teaching and learning activities within the UK and most other countries. In the context of this, there is a need to consider the adaptation of academic integrity panels into an online format and the practical steps needed to ensure such panels are delivered in a manner that allows for a robust investigation of any potential infractions, but also does not disadvantage student engagement with panels.

I have participated in more than 500 academic integrity panels during my career, including approximately 80 panels that have taken place in an online format during the Covid-19 pandemic. This article does not represent an empirical investigation of academic integrity panels but is instead an experiential piece of work that explores issues of good practice for such panels. It is perhaps surprising that there has been very limited empirical work undertaken on the specific implementation of academic integrity panels, which sometimes limits the availability of supporting evidence in this article. The article contributes to the development of good practice literature on academic integrity panels.

Institutional regulations

One of the biggest challenges to running academic integrity panels is the need to adapt institutional policies and procedures to an online format. This should be part of a standard process of regularly reviewing institutional regulations to address issues arising in the sector (Bretag and Mahmud, 2016; Morris and Carroll, 2016). It is therefore essential that those coordinating a move towards online academic integrity panels should consult with relevant groups with oversight of academic integrity regulations within individual HEIs, to ensure no potential conflicts with institutional regulations arise when moving to an online format for panels. For example, this may involve the need to make immediate changes to policies and procedures that are explicitly worded to reflect a face-to-face format. Given that many institutions have staff allocated to specific roles as academic integrity officers, it is essential to consult with such individuals over practical issues for policy implementation.

As students' unions at HEIs often support students through misconduct procedures, it is advisable to also consult with these groups to discuss any proposed modifications to established practice as well as gaining insight into issues that students with equality, diversity and inclusion needs may face.

Online communication platforms

Several online communication platforms have been used during the Covid-19 pandemic for the purposes of teaching and learning (eg Zoom, MS Teams, Adobe Connect). Although these platforms were used to host academic integrity panels before the pandemic, anecdotal evidence from fellow academic integrity coordinators suggests they were primarily used in specific circumstances, such as for distance learners and international students unable to attend face-to-face panels.

Unlike face-to-face academic integrity panels, online panels necessitate students having access to IT resources appropriate for reading email correspondence, reviewing documentation and using online communication platforms. Furthermore, online academic integrity panels require students to have a suitable internet connection to fully engage with panels, particularly video functions. This is especially true when transmission delays can alter perceptions of individuals, which may be a factor in academic integrity panels (Schoenenberg, Raake and Koeppe, 2014). As many students, particularly those from less advantaged backgrounds, may not have reliable IT access and internet connections, it is essential HEIs provide appropriate equipment and internet access for students when necessary. In a positive move, many HEIs are offering a loan system to support less advantaged students access IT equipment and appropriate internet access (The Guardian, 2021). It is good practice for this issue to be raised in advance with those students invited to online academic integrity panels to ensure this issue is considered.

An additional concern is based around the concept of online etiquette. It is good practice to remind those attending online academic integrity panels of some basic steps such as asking all participants to keep their microphone muted unless they are talking, to cut down on background noise, and reminding everyone that only one person can speak at once (Hassan, 2021). Finally, given the increased fatigue associated with online meetings (Wiederhold, 2020) it is advisable to minimise the number of consecutive panels staff undertake, to ensure each potential case of misconduct is considered in an equitable manner.

Examining evidence

All academic integrity panels involve considering evidence of potential misconduct. As per the OIA guidance (OIA, 2021), this will usually take the form of documents summarising the issues considered and evidence of potential misconduct such as copies of student work, reports from plagiarism-detection services, reports from examination invigilators, stylometric analyses to demonstrate potential cases of contract cheating, data files to demonstrate potential data falsification, and messages exchanged between students and other parties. It is essential that these documents clearly summarise the potential issues in a manner accessible to the panel members, students involved and administrative staff.

When academic integrity panels are held face-to-face it is common practice to review this documentation within the panel and to highlight issues of concern verbally. Conducting academic integrity panels via an online format presents potential challenges, such as the ability of students to present their perspectives clearly, for all members of the panel to be able to review appropriate documentation during the panel (especially given the additional time pressures that may be associated with online communication tools, due to, for example, only one individual being able to speak at any one time). To address this, students should be encouraged to submit a detailed statement of their position and response to the alleged misconduct in advance so that this information can be reviewed prior to the panel taking place.

A major advantage of conducting academic integrity panels online through software such as Zoom or MS Teams, is the 'share screen' function enabling staff to directly demonstrate issues that are being considered. For example, reports from plagiarism detection software can be presented directly to the panel, and it is possible to interrogate the report (eg examining the nature of specific sources) during the panel itself. Similarly, information can be directly shown to the panel to verify issues such as the date of sending/receiving emails and their specific content. It is also possible for academic integrity panels to access relevant information (eg submission software, other correspondence, assessment briefs, institutional policy documents) in a timely manner, increasing the efficiency of the panels. This represents a significant advantage over face-to-face panels.

Student engagement with panels

Attending an academic integrity panel can be an intimidating experience for a student, coupled with possible feelings of guilt, a need to discuss personal circumstances which may have given rise to misconduct, the potential need to criticise friends and course colleagues in collusion cases, and fears over possible penalties and outcomes from the panel. Students should be put at ease at the start of an academic integrity panel and the potentially intimidating nature of the panel should be explored; procedures should be clearly explained to students, their individual rights detailed and their option of taking a moment to confer with an advisor, such as a friend or a students' union representative, or to collect their thoughts, should be outlined.

One issue for consideration is whether cameras in online communication platforms are required during online panels. Although the remote nature of an online academic integrity panel may make it less intimidating than a face-to-face panel, it remains a stressful experience. As discussed in the wider literature on online teaching, students are often hesitant to use cameras in an educational setting (Castelli and Sarvary, 2021). Additionally, students may be more prone to self-evaluation through being able to view their own image in an online panel (Gonzales and Hancock, 2011). In these circumstances, it may be advisable to allow students to keep their cameras off during panels. From personal experience during the last year, it also appears that this leads to more concise and articulate responses from students as the pressure of the situation is reduced through perceived anonymity.

An additional benefit of online academic integrity panels is that students can join from any location, overcoming potential issues they may have faced if they had to commute to attend a panel in person. Issues, such as delays in public transport or difficulties in finding a specific location on campus, are also overcome. This ability to join a panel from any location may be of particular benefit from an equality, diversity and inclusion perspective, or for international students who may have returned home and would be unable to return for a face-to-face panel.

Providing student support

Attending an online academic integrity panel can be stressful for students, particularly if they prefer face-to-face interactions for pastoral support (Price, Richardson and Jelfs, 2007). It is imperative that students have a means of discussing queries about an upcoming panel and can access support in an online format, such as online discussions with personal tutors or support staff. Additionally, it may be advisable to produce resources addressing common student concerns about the nature and format of panels to help them prepare. Given that a significant number of panels are linked to poor skills development and academic practice by students (McCabe et al, 2012; Pecorari and Shaw, 2019) it may also be advisable to create guidance documents for students to review after participating in panels that identify where support for academic writing, and other skills, can be accessed.

Analytics

Over the last calendar year, I have been involved in roughly 80 online academic integrity panels, allowing for some reflection on the issues highlighted above. There has been a noticeable increase in students attending panels (over 90% attendance in an online format compared to roughly 70% in a face-to-face format) and the number of students submitting detailed statements to the panel in advance has risen significantly (around 75% of students submitting a statement for online panels compared to roughly 25% of students in a face-to-face format). Students also appear to be more comfortable participating in panels as there have been fewer students becoming distressed, and fewer students bringing along representatives for emotional support. Also, it is notable that a higher percentage of students made a timely admission of misconduct in the panels (roughly 50% in an online format compared to 25% in a face-to-face format). These last two points, fewer students bringing a representative and an increase in admissions of misconduct may be linked to the move to an online panel format, but there is a definite need for further empirical research on these issues in order to substantiate the effects of an online panel format.

Conclusion

Given the uncertainty caused by the Covid-19 pandemic it is likely academic integrity panels may continue in an online format for some time. In some circumstances, the increasing numbers of international and distance learning students may require the permanent adoption of online panels. In terms of specific recommendations from this article, it is necessary to consider the following issues when migrating to an online format for panels:

+ reflection on institutional academic integrity policies to ensure they are fit for purpose regarding online panels
+ addressing the challenges relating to software and hardware for facilitating online panels, such as through ensuring appropriate IT resources are available to all students
+ consideration of student engagement in panels, such as whether the use of cameras is necessary
+ providing support to students such as resources to help them prepare for panel engagement.

Additionally, although reviewing the progress of such a panel format will be an ongoing process, there is also a wider need to conduct empirical research on several of the issues raised in this article, and on the process of panel implementation more generally, to ensure that taking part in academic integrity panels is a fair and impartial process for all students.

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Part B:
Inclusivity and assessment

Inclusivity of verbally based assessment: guidelines to support stammering students

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Abstract

In 2020, the outbreak of Covid-19 pandemic has imposed the migration of teaching and learning practices to the remote digital environment. Concerns over academic integrity made verbally based assessment, such as oral exams and presentations, the most viable option for remote examinations. However, this type of assessment does not cater for the learning needs of all students. In particular, students with speech impediments and international students. While the former impacts approximately 23,000 students, the latter makes up a quarter of the student population in UK higher education. This, along with the nature of such assessment, calls for inclusive practices whereby the needs of all students are anticipated and catered for.

When it comes to international students, the unique nature of the hidden disability of stammering can pose great challenges for educators in differentiating a learning disability from a genuine lack of ability in the language. Not only does that impact the learning experience of a student but it also makes it difficult for educators to provide effective support and ensure equality in assessment. While the internationalisation of higher education institutions (HEIs) continues to be of sector-wide concern, it is vital that teaching and academic practices are designed to be inclusive to ensure that all students, regardless of their learning needs, are provided with high-quality equitable learning experiences. This work shares guidelines on supporting stammering students. The guidelines are aimed at sharing best practice on conducting an inclusive oral assessment that would ultimately benefit all students.

Introduction

Problem statement

Globally, oral assessment has been a major model of assessment across different disciplines in higher education institutions (HEI). That is because this type of assessment allows us to probe into the student's knowledge (Gent, Johnston, and Prosser, 1999) which in turn helps with academic integrity (Joughin,1998). Arguably, unlike written assessments, oral assessment is thought to have a role in enhancing the quality of learning, whereby students are promoted to provide convincing answers in confidence to reflect on the depth of their understanding. This makes it a great alternative to students with certain special learning needs such as dyslexia (Waterfield and West, 2006), as it provides the student with the opportunity to ask for clarifications, which helps to mitigate ambiguities.

In 2020, the unprecedented restrictions imposed by the outbreak of the Covid-19 pandemic led to the transition of teaching and learning practices to the remote digital world. This included remote assessment. In engineering education, remote online assessment made it very challenging to ensure academic integrity. The fact that oral assessment can be resistant to plagiarism (Joughin,1998) has made oral assessment the most viable option for remote assessments, group submission or final project presentations. However, such methods of verbal assessment do not cater for the needs of all learners and, specifically, students with speech impediments and international students.

Background

While oral assessment might be authentic (Joughin, 1998; Barnett, 2007), it does not cater for the learning needs of all students. This, for instance, applies to students with speech impediments (ie stammering) and/or language acquisition difficulties (ie international students). The former is often a hidden disability and impacts approximately 23,000 students in the UK higher education (HE) sector (Johnston and Bashir, 2017). The latter constitutes 22% of the total student population in UK HEI (Hubble and Bolton, 2021).

Stammering, otherwise known as stuttering, is a genetic neurological condition. The speech impediment affects 1% of the adult population worldwide (Johnston and Bashir, 2017) and 3% (1.5 million people) of the UK adult population (BSA, 2019). The British Stammering Association (BSA), notes that the disruption of verbal fluency caused by the nature of stammering can be characterised by involuntary silence, reparation or prolongations of – or blocking at – certain sounds or syllabus. As well as physical symptoms, stammering can be characterised by emotional experience. For example, a person who stammers (PWS) might show symptoms of tension, frustration and anxiety as they struggle to produce their words. It is therefore noted that stammering is “a complex communication issue which can affects one’s confidence, self-esteem and self-efficacy” (Johnston, 2019). While stress cannot cause a person to stammer, it is thought to exaggerate the stammer. Iverach et al (2009) argues that social anxiety disorder, which is suggested to be linked to stammering (Stein et al1996; Menzies et al, 2008), is a by-product of the multidimensional stammering effect.

Evidence suggests that a PWS experiences stigmatisation leading to feelings of guilt, shame and embarrassment which might motivate PWS to resort to hiding and avoidance (Ginsberg, 2000; Hagstrom and Daniels, 2004). In fact, avoidance of words, phrases or situations is one of the coping mechanisms practiced by a PWS (BSA, 2019). A student who stammers (SWS) might therefore exhibit behaviour that can be misperceived as low engagement levels in verbally based learning activities, low literacy demonstrated by lack of use of technical and subject-specific terminologies and (or) lack of confidence reflected on verbal fluency (ie hesitation, using fillers, etc). This may lead to

avoiding presentations or oral exams (BSA, 2019). In fact, a SWS may be discouraged by the learning and assessment style from enrolling into a module, course or degree (Johnston, 2019). Research findings by Boyle et al (2009) highlights the negative stereotyping and stigmatisation experienced by a PWS. The impact of the latter, along with the perceived negative reaction of listeners, may discourage a PWS from declaring their stammer and instead be a motivation to resort to avoidance coping. The aforementioned justifies that "PWS can be excluded and discriminated at university" (Johnston, 2019).

According to one survey, which was conducted in the UK to investigate the impact of coronavirus on mental health (Mind, 2020), about 73% of students have experienced poor mental health as a result of government restrictions to control the transmission of Covid-19 virus. Among other factors, declined mental health is triggered by feeling overwhelmed or uncertain about new learning environments and routines (remote learning, limited access to learning facilities and reduced face to face contact with staff and students). It is reported that more than 88% of young people (18-24 years old) with existing mental health conditions, and over half with no previous experience of poor mental health, had lower than average wellbeing score (Mind, 2020). The interconnected relation between stammering and mental health, along with the stress-inducing nature of oral exams (Wisker, 2004), necessitates the need for inclusive oral assessment whereby students with speech impediments' needs are anticipated and catered for.

When it comes to international students, the unique nature of the hidden disability of stammering can pose great challenges for educators to differentiate a learning disability from language acquisition related difficulties. The added vulnerabilities experienced by international students during their transition into the UK HE is well documented in the literature (Bhugra, 2012). Among other transitional difficulties, perception of achievement and expectations can pose greater challenges on a student's academic and cultural adoption. Considering the global lack of universal diagnostic process for learning disabilities, the latter can often lead to undiagnosed learning disabilities and hence language acquisition difficulties. Evidently, the shared characteristics experienced between learners of English language and those with a learning disability are acknowledged in the literature (Ortiz et al, 2006). The latter makes it challenging to identify if the difficulties experienced by a second language learner are rooted to a learning disability or language acquisition difficulties (Duquette and Land, 2014). Not only does that impact student success in terms of continuation and attainment but it also impacts their sense of belonging. The work by Mann and Wong (2013) demonstrates the challenges experienced by a learner as a result of undiagnosed learning disability and signifies the effect diagnosis may have on a student learning experience. However, considering the significance of early awareness in cultivating self-determination (Schechter 2018), developing self-awareness of language-based disorder (ie stammering) in a different language can be a sophisticated process.

Literature review

The lack of research on investigating the learning experience of university students who stammer is well defined in the literature (Meredith and Packman, 2015). Existing efforts on inclusive assessment is limited to written assessments (Waterfield and West, 2006), whereby oral exams are offered as an alternative to students with written assessment related special needs, but the alternative is yet to be investigated. Indeed, the nature of such hidden disability could be a contributing factor. Today, the ever-growing demand for teaching and assessing employment relevant skills, coupled with the advantages of oral assessment (ie academic integrity, requires demonstration of deep understanding and critical skills, marking load efficiency etc) continues to favour verbally based assessment over written assessment. In engineering education for example, this has led to an increase in oral assessments (ie presentations or posters) at an individual as well as group collaborations.

Evidently, oral assessments are perceived by most students to present a social-evaluative threat involved with the listening and judging audience (Woody et al, 2018). One empirical study investigated the influences of written and oral assessments on university students, suggesting that oral exams lead to increased stress levels (Preuß et al, 2010). The study measured the hypothalamus pituitary adrenal axis (HPA) of participants before and after the assessments to examine a student's HPA response to stress levels. Findings reported that while written assessments caused a mild anticipatory HPA response, oral assessment triggered a strong HPA response indicating high stress levels. From an inclusivity point of view, it could be argued that oral assessments might favour extrovert learners who are confident with public speaking (Wisker, 2004).

A qualitative study on the impact of introducing adjustments to oral exams for SWS reported that 55% of participants never considered asking for adjustments to be made for their oral exams (Al Arefi, 2020). More than three-quarters of the SWS who studied in their second language have never considered seeking adjustment for any of their oral examinations; a small percentage of the latter population were offered help, but refused to accept it for fear of the impact it might have on their academic performance and future career opportunities. Interestingly, the study reported that the students who have requested and or accepted the adjustments were studying in their native language.

Given the aforementioned multidimensional complexity of stammering and its implications on student's learning experience, careful consideration should be made to enhance the inclusivity of verbally based assessments by ensuring that the complex needs of learns of interest are anticipated and catered for.

Recommendations for inclusive oral assessment

+ Ensure that students are aware of exam adjustment policies and that exam polices are inclusive and accessible.
+ Allow SWS extra time for verbally based assessment (presentations, viva voce etc).
+ The characteristics of stammering varies between individuals but generally maintaining careful contact with the SWS during their speech, being patient and not be tempted to finish their words for them can be very supportive.
+ Most PWS struggle to say their own names (and possibly the names of others), so where possible avoid introduction.
+ Be aware that the speech disturbance of a person who stammers is a neurological disorder which may be provoked by many factors (ie stress, anxiety) and the degree of disturbance will vary between individuals. In fact, some adults who stammer may never stammer when talking with familiar people.
+ Be aware that PWS recognise their stammer as part of themselves. Comments on the degree of their stutter could have a negative impact (eg your stammer was not well pronounced, you did not come across as a person who would stammer).
+ SWS may seem very frustrated as they struggle to produce their speech, and some may experience deep feelings of regret and/or shame. Because of that a SWS might avoid talking and only reply with a short answer.
+ As appropriate, allow SWS the opportunity to follow up in writing after the exam.
+ Some SWS may find it easier to read from written text or speak while distracted by listening using headphones, so where appropriate suitable adjustment could be made.
+ Avoidance and replacements of words is one of the most common coping techniques for stammers. Please do not misinterpret this for language/subject knowledge incompetence.
+ Hesitation is a key feature of stammering. Please do not confuse this with lack of confidence and or assertiveness.
+ Voluntary stammering for self-advertising is a speech therapy technique. In such cases, showing understanding and patience can be very useful.

Conclusion

Today, with promising efforts towards internationalisation and acceleration of inclusive education practices across the HE sector, careful measures should be taken to ensure that hidden disabilities such as stammering are anticipated and catered for so that SWS are not misinterpreted for language or subject knowledge incompetence. In this regard, it is important to ensure that information on exam adjustment policy is inclusive and accessible. It is equally important that students are educated about their academic rights and are empowered to unlock their academic potential regardless of their learning abilities. A greater responsibility falls on personal tutors to support students with self-awareness and self-determination of learning abilities. The latter necessitates the need for educating educators (specifically personal tutors) on neurodiversity in general and have an appreciation of significant impact of inclusive learning on a student's learning experience.

Author biography

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Pre-assessment support: is it 'one size fits all'?

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Abstract

The use and effectiveness of academic support have been suggested as possible contributing factors in lower attainment for students of black, Asian and minority ethnic (BAME) groups compared to white students. We investigated the use of pre-assessment support in nutrition and sport science courses at Kingston University, London, and explored students' preferences, to determine whether differences were evident between these student groups. Data collection consisted of questionnaires and focus groups, led by student research partners. A total of 80 students completed the survey in this preliminary study, 47 (59%) reporting their ethnicity as white and 33 (41%) as BAME. Results suggested minor differences between white and BAME students in use of academic support, but more marked differences in preferences, where the highest preference of BAME students was in-module tutorials (52%) compared to white students preferring drop-in hours or appointments with lecturers (57%, 53% respectively). Students' use of support is influenced by pre-assessment concerns, preferences for more specialised and personal forms of support and preferences regarding the nature of communication, which should be considered when planning assessments. One third of students identified online support as a preference, pre-Covid-19, favouring retention of remote support strategies to help provide universally accessible support options.

Introduction

Unequal outcomes

In higher education, a difference in attainment is widely observed between UK domiciled white students and UK domiciled black, Asian and minority ethnic (BAME) backgrounds. When quantified based on degree outcomes, this is defined as the awarding gap, with the most recently available Higher Education Statistics Agency (HESA) data from 2018/19 indicating that 81.4% of white students were awarded a first or 2:1 classification, compared to 68.0% of BAME students, resulting in a 13.4% difference (Advance HE, 2020). Furthermore, although the extent of the awarding gap has improved from levels of 17-18% some 10 years ago (Equality Challenge Unit, 2013), the last few years have plateaued at similar levels (Richardson, 2015; Smith, 2017). By grouping diverse and dissimilar populations, the much publicised BAME awarding gap also obscures the concerningly high levels of disparity observed for some ethnicities, such as black students, for whom the awarding gap compared to white students exceeds 22% (Advance HE, 2020). The reasons behind differences in achievement that lead to the awarding gap are complex and unclear, persisting when corrected

for intake qualifications (Richardson, 2015; McDuff et al, 2018), illustrating a need to explore the educational and assessment experiences of specific student groups.

Inclusive assessment

An inclusive curriculum is one that is designed to improve the experience, skills and attainment of all students (McDuff et al, 2018). One of the fundamental principles associated with the inclusive curriculum is accessibility, such that no students should be disadvantaged in any aspect of their learning or assessment. Areas of good practice include ensuring diversity in educational examples, a variety of assessment strategies and enabling students from a wide range of backgrounds to see themselves reflected in the higher education environment (Hughes et al, 2019) but variation in the awarding gap between institutions and across courses and subject areas suggest a clear influence of teaching and assessment practices (Richardson, 2015). When addressing the awarding gap, we need to consider the importance of opportunity for students of all backgrounds to relate to the academic experience. However, due to the complex nature of the problem (Austen et al, 2017), the challenge remains to identify specific areas for improvement that will make a difference to students, where we might be inadvertently exclusionary, preventing students from fulfilling their potential.

Assessment strategies in science-based subjects often emphasise scientific writing or use of academic language, such as in written laboratory reports, scientific essays, presentations or demonstration of practical competency (Gao et al, 2020). Associated assessment criteria need to be well understood and effectively met to maximise grades achieved, so all students benefit from the opportunity for tailored guidance and support when preparing assignments (Bloxham and West, 2007). Academic language is embedded within the higher education experience, which can be exclusionary for some students (Stevenson, 2012; McKay and Devlin, 2014) and a report from The Open University highlighted that BAME students in particular can at times struggle with academic language (The Open University, 2013). Both generic faculty-led and subject-specific support are made available to students in a range of guises, such as skills training, bookable appointments with faculty or academic staff, scheduled 'drop in' sessions and tutorials to help with learning and assessment. However, this approach leans more towards equality of opportunity than inclusivity, when students' requirements for support may differ (Stevenson, 2012) and, anecdotally, uptake of the support on offer is low. While it has been suggested that BAME students may be less likely to access support (Stuart et al, 2011; Smith, 2017) it has also been found that BAME students do not feel sufficiently supported to reach the high standards they wish to achieve (Bunce et al, 2019), emphasising the importance of inclusive and relevant support and supporting rejection of an inherent skills deficit (Panesar, 2017).

Due to persistent gaps in attainment at module level within an inclusive curriculum framework, this study aimed to evaluate awareness, use and preferences for academic support for students on five related degree programmes.

Approach

This research project received ethical approval from the Kingston University Research Ethics Committee and was part of the Student Academic Development Research Associate Scheme (SADRAS), developed by Kingston University to support research partnerships with students (McDuff et al, 2018). This work was undertaken as a pilot for a larger scale study that is in development.

Participants

Participants were undergraduate students across levels three to six on BSc Nutrition (Human Nutrition), BSc Nutrition (Exercise and Health), BSc Sport Science, BSc Sport Science (Coaching) and BSc Sport Science with Business degree programmes. Students from these courses were selected for this preliminary study as cohorts represented a diverse student population, with evidence of gaps in attainment in degree outcomes and across modules, and we could be confident that these students were all exposed to similar levels, methods and availability of student support. From an estimated population of 220 students, 80 completed the questionnaire and eight respondents took part in the focus group.

Methodology

The project ran in the academic year 2019/20 and consisted of hard copy questionnaires, completed in December 2019, and focus group discussion, completed in February 2020. Student research partners publicised the study through word of mouth and distributed information sheets and questionnaires to volunteer participants. The survey took approximately five minutes to complete and asked for anonymous demographic information (course, year, ethnicity, commuting status), followed by awareness and use of pre-assessment support, based on the academic services offered by the university and course teams at that time, in addition to students' preferences and reasons for not seeking support.

Questionnaires were complemented by a focus group of eight students, from levels four, five and six. Participants volunteered by responding to an invite at the end of the questionnaire. This focus group allowed the study to capture a more comprehensive view of student members' preferences (Ainscow and Messiou, 2018) and followed a semi-structured guide, led by student partners. Two student partners facilitated discussion, based on questions developed by the students in collaboration with an experienced member of staff. The session was recorded and transcribed for analysis.

Analysis

Descriptive statistics were analysed in Microsoft Excel to determine means, sums and percentages. Responses were grouped for students reporting their ethnicity as white and students reporting their ethnicity as black, Asian or other ethnic minority groups. We acknowledge the constraints in such grouping of diverse and disparate ethnicities but limitations of participant numbers prevented further breakdown of the data. Group comparisons for categorical data were carried out using a chi-square test and numerical variables were compared using a t-test. Significance was set at a level of .05. The qualitative data were analysed using hierarchical content analysis, which identified codes,

grouped them into categories and dimensions, and identified the way these patterns interact (Sparkes and Smith, 2013). This allowed the identification of similarities and patterns in the data and the creation of higher and lower order categories.

Results

The majority of respondents were studying at levels four (29%), five (34%) and six (34%), with only 3% from level three. Students had a mean age of 22.4 years (standard deviation 4.3 years), with no differences between analysed groups. In terms of ethnicity, 59% were white and 41% were in BAME groups (18% black, 8% Asian, 10% mixed or multiple ethnicities, 6% other minority ethnicities). There was no significant difference in numbers of commuting students (61% of white students, 64% of BAME students) but journey times were significantly greater for black students (means: 57 minutes vs. 39 mins, p=0.03). Overall, students reported moderate awareness of the academic support available (Figure 1; 65% Faculty Centre (SEC Academic Success Centre), 83% lecturer drop in, 56% lecturer appointments) but use of support was much lower (Figure 2; 25% Faculty Centre, 50% lecturer drop in, 30% lecturer appointments). There were slight, but non-significant, differences between white and BAME students for use of lecturer drop in (55% vs 42%) and appointments (36% vs 22%) and a significant difference in use of peer support (28% vs 9%, p=0.04). A moderate proportion of both student groups reported seeking academic support from their personal tutor (34% white, 39% BAME).

Figure 1: Responses to the question: 'Which of the following academic support services are you aware of?' VLE = virtual learning environment (Canvas).

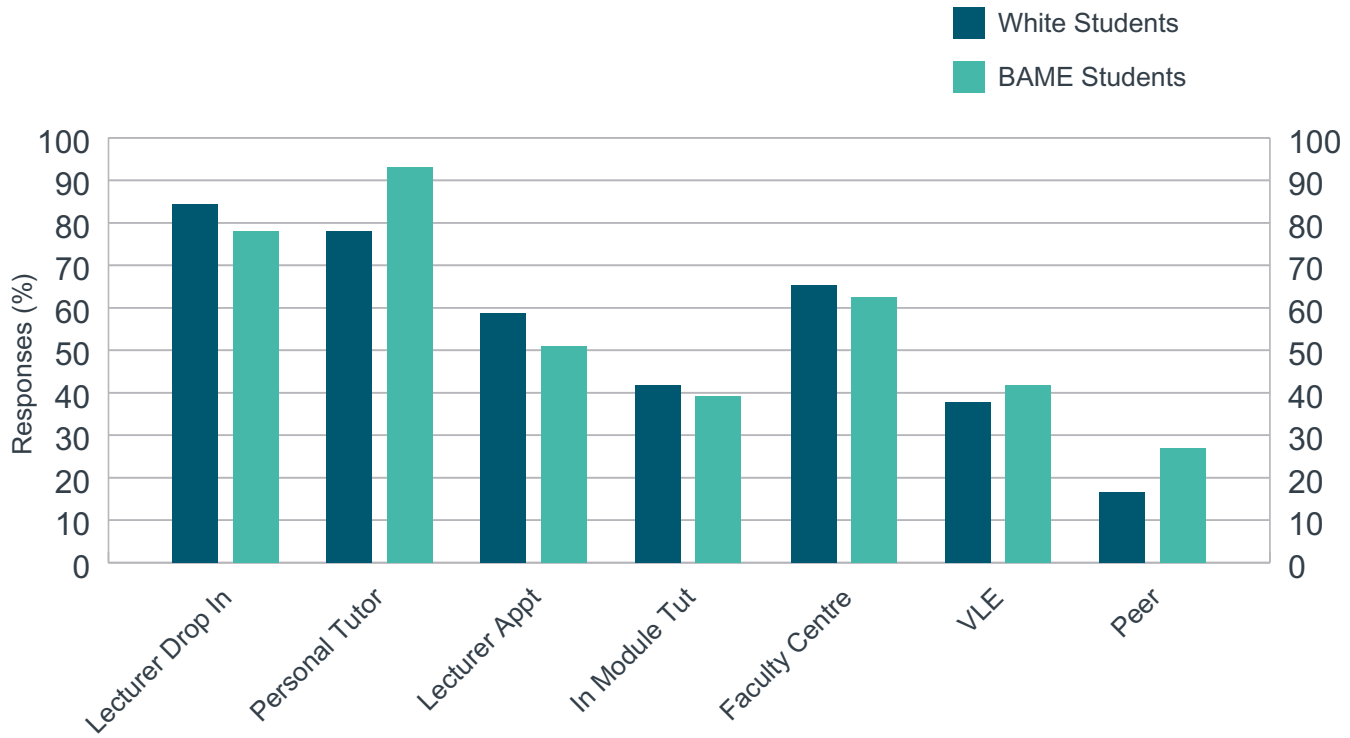

Figure 2: Responses to the question: 'Have you used any of the following for pre-assessment support (help when preparing an assignment for submission)?' VLE = Virtual Learning environment (Canvas).
***denotes significant difference between groups (p<0.05)**

When asked reasons for not seeking support, the most common responses were related to time constraints (Figure 3), defined by being 'too busy' (23% white, 33% BAME) or working too close to deadlines (25% white, 21% BAME). Availability and location were also indicated more commonly by BAME students (25% and 15%, respectively), while few of the white students highlighted these as a factor (6% and 9%, respectively). Preferences for support reflected some trends observed in used support (Figure 4), such that BAME students' highest preference was in-module tutorials (52%), which was significantly greater than white students (28%, $p=0.03$), compared to white students having a significantly greater preference for lecturer appointments (53% vs. 27%, $p=0.02$). Use of online support was also indicated as a moderate preference for the whole student group (white 27%, BAME 36%). Analysis of focus group data (Figure 5) found that student use of pre-assessment support is influenced by pre-assessment concerns (eg deadlines, the content and existing responsibilities), preferences for more specialised and personal forms of support (eg subject specific lecturers and personal tutors), and preferences regarding the nature of communication (eg face-to-face and flexible).

Figure 3: Responses to the question: 'If you have not used any form of academic support when preparing an assessment, what are your main reasons for this?' *denotes significant difference between groups (p<0.05)

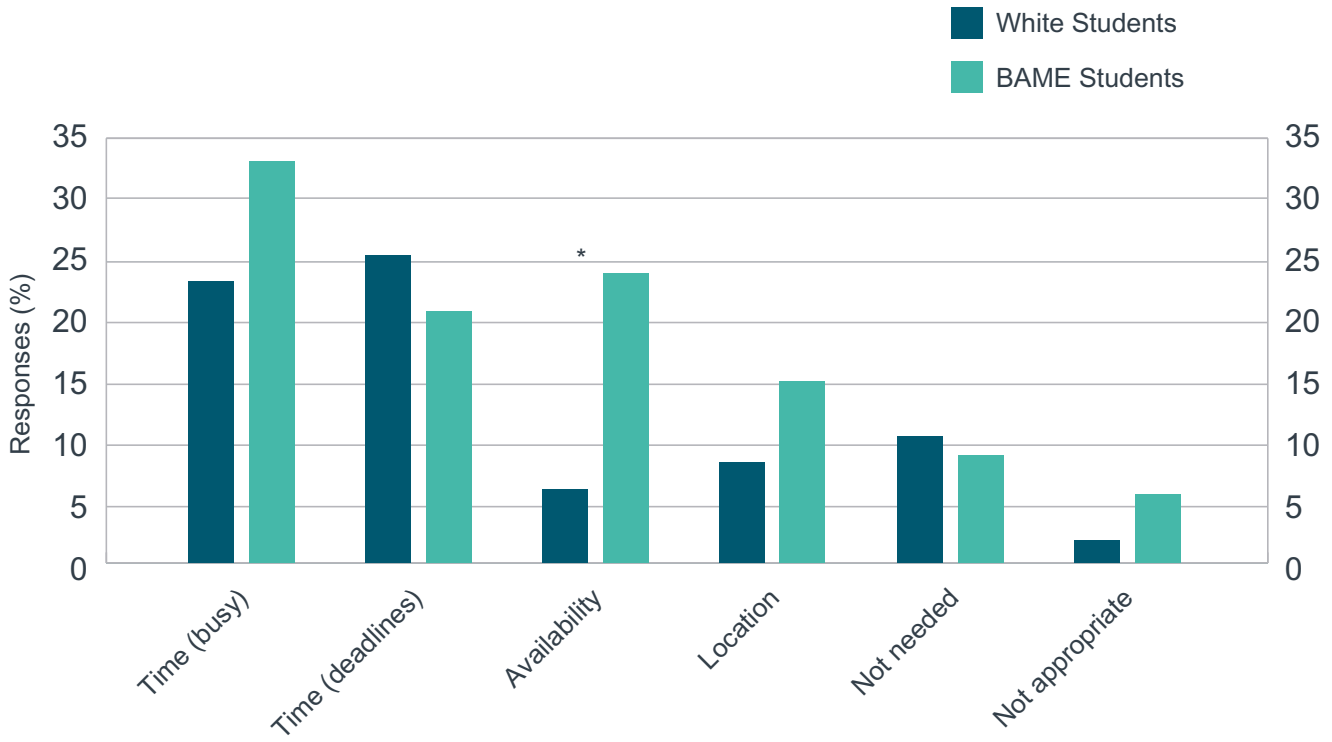

Figure 4: Responses to the question: 'What would be your preferences for support when preparing an assignment?' VLE = virtual learning environment (Canvas). *denotes significant difference between groups ($p<0.05$)

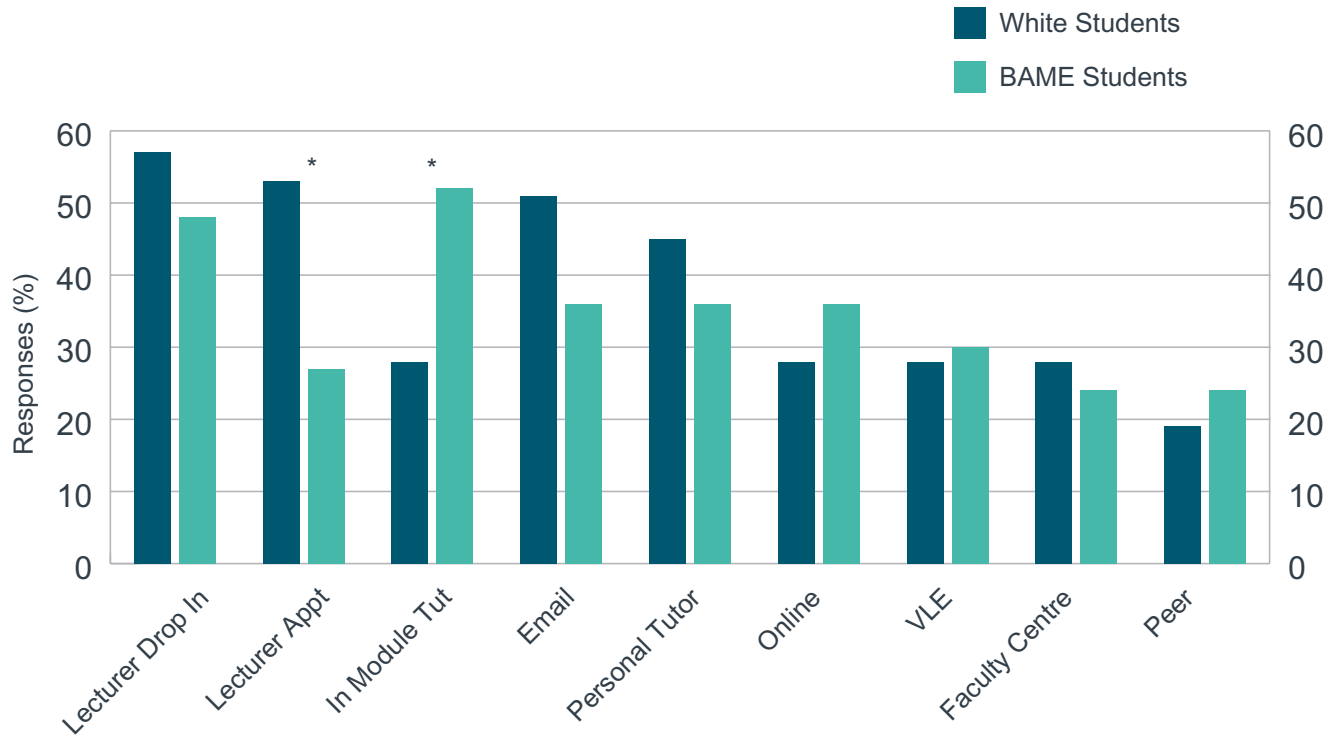

Figure 5: Thematic analysis of focus group data

Discussion

This study explored the perceptions of a relatively small sample of students but had the benefit of those students having been consistently exposed to the promotion of available support opportunities. Inclusion of a focus group also allowed an enriched perception based on student feedback (Poulos and Mahony, 2008). Although students were aware of the availability of academic support (Figure 1), reported use of this was low, with academic staff providing the majority of support, which is consistent with previous research (Walsh et al, 2009). Students discussed how wider determinants of their university experience also affected their need and preferences for academic support (Arambewela and Maringe, 2012). Only one third of students who reported knowing about centralised faculty support had used this (Figure 2), compared to more than half for course-specific support. In the focus group, students primarily expressed concerns relating to their specific assignment, thus seeking targeted guidance as opposed to more generic support, such as academic writing skills. One student stated: "...*because of how specific our course is, you need to have someone that has an understanding of what you are doing". Another stated: "I have tried the library to help with referencing and... it was useful but at the same time they didn't really understand my situation".*

Time constraints were a common concern but the reason for such constraints were individual to the student. A student expressed the importance of knowing: *"how much time [they] have until the deadline to find out how much time [they] need"* to complete a specific assignment, to manage their workload. However, a second student admittedly reported: *"[they] always do everything last minute"* due to poor time management and personal circumstances. Although time constraints were reported as influencing factors by both student groups, availability and location were also indicated more commonly by the BAME students. One factor that influences such constraints is that of commuting, with BAME students shown to be more likely to have longer journey times. Consistent with this, preferences for support leaned towards group support in scheduled sessions for the BAME students, while white students preferred one-to-one support outside of the timetable (Figure 4). Since peer support is also often a campus-based collaborative process, restrictions on time outside of planned sessions can impede participation, as indicated by differences in peer support use (Figure 2), and associated benefits, such as greater academic success and more positive self-efficacy beliefs (Ashwin, 2003; Altermatt, 2019).

When considering competing demands on students' time, it is not surprising that a third of students reported online support as a preference (Figure 4). This is particularly interesting since this was not widely available at the time of questionnaire completion. This is indicative of a desire for accessible and flexible support, which has the potential to reduce barriers to access. However, although previous consideration of online support has identified it as an appropriate form of academic support, no reduction in the ethnicity attainment gap is evident through distance learning courses (Price et al, 2007; Richardson, 2009), demonstrating the importance of a variety of support strategies to accommodate students with diverse needs and different types of learners (Lee et al, 2011). Embedded support within scheduled teaching and more flexible access to academic staff, as achieved through remote provision, could go some way to achieving a more inclusive provision and staff should be mindful of the needs and preferences of their students when developing assessments,

particularly in terms of the required support. An assumption that students can access physical drop-in or inflexible time-limited support could inadvertently disadvantage those whose time on, or access to, campus is more constrained. This provides an opportunity to determine how best we can use the enforced restrictions and remote learning provision of the Covid-19 pandemic to improve practice.

Furthermore, the findings of this study also indicate the need to understand the requirements of different student groups to provide support options that are relevant (Lee et al, 2011; Richardson, 2015; Smith, 2017). The specificity of students' requirements was apparent from thematic analysis of the focus group data, which showed preferences were primarily influenced by particular pre-assessment concerns, closely followed by considerations of accessibility and availability of provided options. Connections with staff were also important, with personal tutors in particular being a source of both academic and non-academic support, capable of providing specialised advice and forging an interpersonal relationship with the student (Yale, 2019). One student reported they *"go to the person [they] gravitate towards"*, demonstrating the value of students making connections with academic staff (Stevenson, 2012). Appropriate promotion and signposting of support should be in place, both centrally and through preferred contacts, to maximise visibility of the variety of services available and enable students to make informed choices when preparing assignments.

Conclusion

This preliminary study highlights that preferences for academic support vary, depending on the specific needs of the students and it is vital to listen to the student voice and understand requirements of different groups to provide universally accessible support options. Student feedback also illustrates the importance of accessibility and relatability of staff and the benefits of personal support, in both one-to-one and group environments, to accommodate the needs of diverse learners and provide opportunity for students of all backgrounds to fulfil their potential.

Recommendations

1. Efforts to provide academic support need to recognise that a 'one size fits all' approach is not appropriate and, far from providing equality, can disproportionately affect certain populations of student.
2. Collaborative strategies could ensure that academic support is appropriate and relevant to the needs of the students.
3. Remote working practices could enhance the accessibility of academic support for students but this needs to be carefully balanced with the working demands of academic staff.
4. Students' requirements and preferences for support should be considered when planning assessment strategies.

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Bridging inclusion and employability: creating significant real-world experiences in the curriculum

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Author's note: This paper refers to the work that I led as Curriculum Employability Enhancement Manager within the Careers and Employability Service at Kingston University from 2018-2021. I would like to thank colleagues at Kingston who were involved and supported this work during this period. In August 2021, I begin my new role as Head of Careers and Employability at King's College London and have provided my new contact details for any colleagues interested in finding out more.

Abstract

Traditionally in higher education (HE), employability development is associated with extra-curricular experiences, such as internships and year-long placements. These experiences have been found to have a positive correlation with degree attainment and transition into graduate-level roles. However, these experiences are also intrinsically exclusive and unscalable – there just aren't enough opportunities for every HE student and the opportunities that are available are often inaccessible to the growing numbers of students from 'non-traditional' or disadvantaged contexts. Considering the diversifying nature of the HE student population and the volatile context of the 21st century that they must navigate, universities can no longer neglect their responsibility to support all students to transition into graduate-level careers by relying on extra-curricular activities. It is, therefore, critical that providers consider how significant, real-world experiences can be facilitated at scale, so that *all* students can reap the benefits.

This paper makes the case that this can only be achieved through reconceptualising the core curriculum so that it effectively introduces, develops and consolidates both disciplinary and professional learning. It aims to showcase how programmes can design inclusive curricula and provide significant experiences by facilitating authentic assessments through community and industry engagement, enabling all students to apply their theoretical learning in a real-world context.

Context

The demographic profile of students entering HE is progressively diversifying, as society continues to recognise the value of a university degree in transforming the lives of individuals, especially those from disadvantaged contexts. As such, a key driver for increasing numbers entering HE is the aspiration of securing a good job and all that follows from it. In addition, the 21st century is defined by rapid change and volatility, and employers have emphasised the importance of students and graduates cultivating resilience, understood as "the process of adapting well in the face of adversity (…) It means 'bouncing back' from difficult experiences" (Karzunina et al, 2018). However, professional or career development is still often perceived as a secondary concern of the institution; one that is looked after by the careers service and engaged with by students outside of the curriculum and in their own time.

Internal research was conducted on the barriers to student engagement in enrichment activities (Manoharan, 2016). These are extra-curricular activities such as volunteering, societies and internships, or what has traditionally been understood as the main mechanisms through which students develop their employability. The research identified that today's students juggle a range of priorities alongside their studies, including financial and caring responsibilities, which prevent them from actively engaging in these experiences. This is problematic, as placements and internships are recognised as one of the most effective methods of employability development. Research (Hejamdi et al, 2012; Brooks and Youngson, 2014; Smith et al, 2018) has identified a positive correlation between those who complete one-year placements and their achievement of good degrees and graduate-level roles. However, these work-based learning experiences are intrinsically exclusive – there just aren't enough opportunities for the number of students in HE and the opportunities that are available are often inaccessible to 'non-traditional' students, such as those who have caring or financial responsibilities. Therefore, they can be unreachable to the most disadvantaged.

The research conducted also revealed a pervasive belief that a good degree would directly lead to a good job. While a university degree certainly increases your chances, research by the Institute of Student Employers (ISE, 2018) reveals that the degree itself isn't what employers are looking for – it is the transferable skills and competencies that students develop through the process of higher education that they are interested in. Such competencies cannot be learned from a textbook alone but must come from a range of experiences – experiences that only certain students can currently access.

The combination of multiple responsibilities and a misperception of the graduate recruitment landscape means that students are becoming more strategic learners. They are prioritising the compulsory aspects of their degree programme, namely the core curriculum and summative assessments. As such, decreasing numbers of students, especially students from disadvantaged contexts, are engaging with extra-curricular activities and experiences (Manoharan, 2016). It then becomes clear that if universities want to 1) improve the student experience by better serving their diverse student populations, 2) improve key metrics eg progression, attainment and graduate outcomes, 3) eliminate outcomes gaps, and 4) prepare students to be effective 21st century professionals, then it is critical to reconsider what an inclusive curriculum looks like and achieves.

Inclusive curricula

The notion of inclusive curriculum (Hockings, 2010) has been around for a number of years and is often understood as 1) access to the curriculum for differently abled students (Grace and Gravestock, 2009) or 2) decolonising the curriculum to enable students to engage with a greater diversity of thought within their disciplinary context (Bhambra et al, 2018). Both aspects are important advancements in curriculum design thinking. However, their focus is on students effectively engaging with their degree programme and not necessarily on preparing them for the rigours of life afterwards.

Data analysis from the Office for Students tells us that, in addition to differential attainment between various student groups, there are also differences in graduate outcomes (Office for Students, 2019). If getting a good job is the aspiration for students to enter higher education and they are not able to achieve that on graduation, and that this is an issue mainly experienced by 'non-traditional' students, then it could be argued that universities need to do more. The notion of inclusive curriculum needs to expand from a focus on disciplinary content to the skills, competencies, and significant experiences that students can gain through the learning process. The Global Skills Gap report (Karzunina et al, 2018) reiterated that employers are looking for graduates with transferable skills, the most important of which are problem-solving, teamwork and communication. It also recognises the important role of universities in supporting the development of these competencies through both extra-curricular opportunities and active learning (Karzunina et al, 2018, 6).

Enquiry-based learning

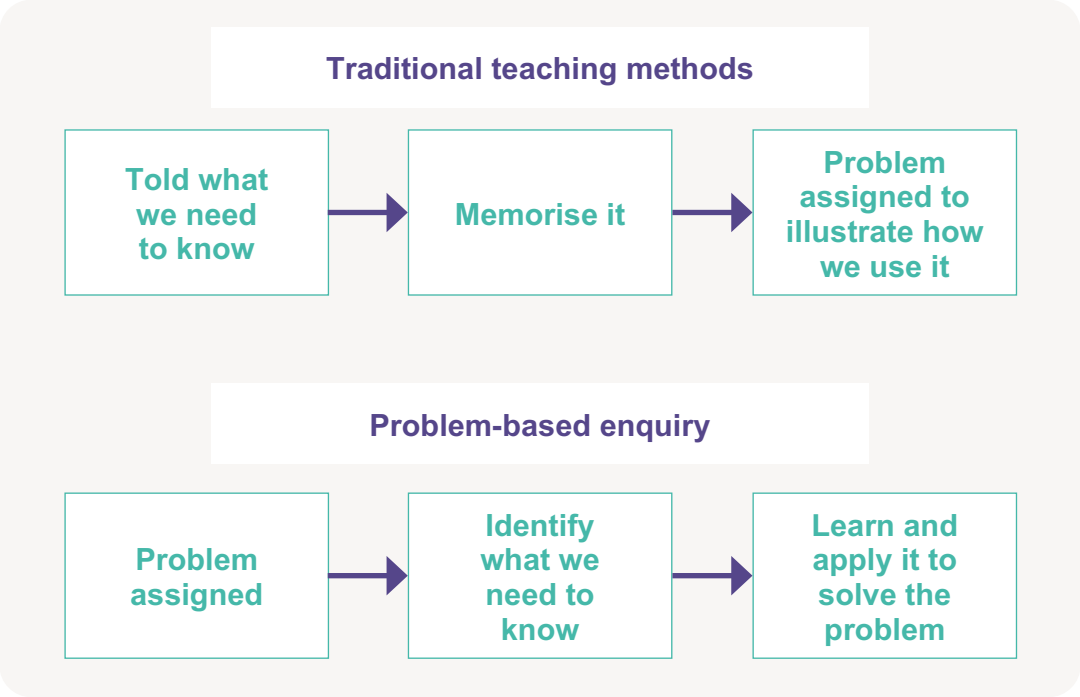

Figure 1: Difference between traditional and enquiry-based learning.

Enquiry-based approaches are student-centred, active learning methods that begin with a question or problem (see Figure 1). To answer the question or solve the problem, students must draw upon and synthesise their existing knowledge as well as research further to identify what they need to know. They then apply this to the context to actively solve it. Scholarship demonstrates how enquiry-based approaches enable students to develop a range of higher order skills (Madhuri et al, 2012; Marshall and Horton, 2011). The applied and dialectic nature of these pedagogies can also benefit multi-ability classrooms, allowing both academically and practically minded learners as well as neurodiverse students to engage in ways that traditional rote or passive academic learning may not allow. Therefore, enquiry-based approaches can be considered a more inclusive range of pedagogies that also allow students to develop skills for success. Yet, we find that enquiry-based approaches are rarely implemented in non-vocational programmes.

As Todd states (Chu et al, 2017, vii):

> "On the one hand, there are concerted calls for a deliberate, deep and sustained focus on deepening and enriching the learning experience and outcomes of students...On the other hand, educational practices and assessment approaches continue to embody standardisation and competition (...) content knowledge (…) and the regurgitation of factual knowledge".

If we want students to have the capability (Sen, 1991) to navigate their lives and careers effectively in the 21st century, then we need to significantly change our approach to curriculum design to one that cultivates "greater human agency, creativity, and an inquiry mindset" (Chu et al, 2017, 8). This means moving away from traditional methods of teaching and assessment, such as essays and multiple-choice tests, to authentic assessments that allow students to apply their theoretical learning in an authentic activity and/or environment.

Authentic assessments

Ashford-Rowe et al explain, "within authentic assessment activity, students are required to demonstrate their ability to analyse the task and synthesise, from the range of skills and knowledge that they have acquired, those which will be necessary for the completion of a specific outcome, where the approach to the potentially correct response may not always be clear-cut or obvious" (2014, 207). As Ko et al (2012) share, this type of assessment activity differs "to conventional paper-and-pencil tests that focus on knowledge reproduction and low-level cognitive processing skills in artificial, contrived contexts" (2012, 137). Instead, "authentic assessment tasks emphasise knowledge construction, complex thinking, elaborated communication, collaboration and problem solving in authentic contexts" (2012, 137). Authentic assessments have "been found to have a positive impact on student learning, autonomy, motivation, self-regulation and metacognition; ability highly related to employability" (Villarroel et al, 2018). Indeed, it could be argued that these are competencies required for lifelong learning, which is a fundamental mindset for resilience and career success in the 21st century.

Ashford-Rowe et al (2014) undertook a literature review of authentic assessments and identified "eight critical elements of authentic assessments from the literature" (2014, 207-210):

1. Authentic assessments should be challenging
2. The outcome should be in the form of a performance or product
3. The assessment should ensure transfer of knowledge from one area to another
4. A component of assessment should be in relation to metacognition
5. A requirement of passing the assessment should focus on accuracy in performance
6. Assessments should consider the assessment environment and the tools used to facilitate the assessment task
7. Feedback and the discussion of this should be formally designed into the assessment process
8. Assessment should facilitate and highlight the value of collaboration

The key differences between traditional assessment and authentic assessment then are: 1) the relationship with the real world, 2) the focus on application of knowledge and skills, and 3) the active role of the student throughout the process as the key instigator of learning and knowledge production. Because of the active nature of this assessment approach, students achieve *deep learning,* which enables them to apply learning in different contexts and leads to change in approach/practice. This process also develops higher order skills, which will benefit students both in their personal and professional lives.

Examples of authentic assessments can range from scenarios to real-world challenges and consultancy. The impact of authentic assessments on students can be enhanced further through engagement with external partners, such as community organisations or SMEs. Through working with 'clients' to facilitate real-world learning and authentic assessments, students are able to use their theoretical learning to make real impact for an organisation and their stakeholders eg service users, residents, clients or customers.

Community and industry-engaged learning

An important factor of career development that is often overlooked is social and cultural capital, as articulated in Tomlinson's graduate capitals model (2017) where social capital refers to professional networks and cultural capital is the knowledge of occupational and working cultures. Students and graduates from disadvantaged contexts often do not have the connections to provide the guidance and inside knowledge to navigate recruitment processes and professional environments successfully. This can be a barrier for them in securing graduate-level employment. It is, therefore, important that the core university experience provides students with the opportunity to cultivate their social and cultural capital, so that they can gain the knowledge and experience to navigate these alien spaces

effectively. It is difficult to achieve this through traditional teaching and assessment methods, such as essays and multiple-choice tests. However, it can be argued that the development of social and cultural capital can be scaled-up within the core curriculum by implementing enquiry-based learning and authentic assessments through partnerships with community and industry partners, eg community-based organisations, Small and Medium Enterprises (SMEs), or local government.

This type of real-world learning is beneficial for students, external partners and the university:

+ students are provided the opportunity to apply their classroom learning in an authentic real-world activity. Through working with an external 'client', students can also grow their professional network (social capital) and experience different working cultures (cultural capital). For strategic learners who only engage in assessments, the introduction of the external partner adds a layer of accountability that can engage them at a deeper level. These authentic assessments also enable students to develop their civic confidence and competency, as through the learning process they are asked to recognise how their learning can be applied to achieve real-world impact
+ external partners are often excited to be working with university students, as they can benefit from students' knowledge and energy to address a challenge and add capacity or value to their work
+ the relationships established to support the curriculum can become formalised knowledge exchange partnerships with a university. Individual academics can benefit from this process as they, too, are growing their professional networks. In addition, this inclusive learning and teaching approach can also feed into their HEA Fellowship and promotion applications

For these reasons, at Kingston University, the Careers and Employability Service has focused on supporting academic teams to develop authentic assessments that ask students to solve a problem for an external partner – thereby demonstrating the knowledge and competencies required in professional life. This pedagogical approach and assessment method enables all students to have a significant real-world experience that can mirror the benefits of internships and placements.

Implementation: a collaborative partnership approach

Because enquiry-based approaches, authentic assessments and community-engaged learning do not tend to be used as primary pedagogical methods in UK HE, it is important that academic teams are effectively supported to introduce and develop these within their programmes. There are many teams within a university who can and are willing to support this change. At Kingston University, the Careers Service, along with colleagues in Enterprise Education, work with academic teams to bring in community-based and SME partners who provide relevant live briefs ie a real organisational challenge they are experiencing. Faculty-aligned Employability Partners provide discipline-specific guidance and support to course teams on a range of areas to ensure the learning activity and assessment can be as effective as possible, including what type of live brief would work for the size of the cohort and discipline, how it should be scheduled across the semester/year, where and what assessments could/should be implemented, and how to support assessment success through relevant skills workshops.

For example, the service encourages students to work in groups, with access to the external partner, to define the problem, research the situation, develop and test potential solutions, and then present their ideas to the client. The assessments attached to this learning process include a research/ business report, group presentation to the client, and individual reflection. Academic teams have found this practical support invaluable in introducing new and authentic teaching and assessment methods while juggling myriad responsibilities. Once they become used to the activity/assessment, ie after a couple of academic cycles, they are then confident and able to continue running this enquiry-based approach themselves.

Designing the student development journey

To ensure that students are supported to build on their learning at each level of study, it is important to take a programmatic approach to designing the student development journey. At Kingston University, the Faculty Employability Partner facilitates employability mapping sessions that allow course teams to work together to identify what employability means for their subject area, imagine their ideal curriculum, map where they are against this currently, and then identify an action plan for enhancement with the support of the Careers Service. This process allows academic teams to design the student development journey across the programme and pinpoint where significant experiences are being facilitated. This can then be explicitly communicated with students to help them recognise the transferable skills and competencies they are developing and how this can be translated into a professional context.

Some good practice that has been identified through this work is to introduce this type of learning activity and assessment early in the HE journey eg in the first year of an undergraduate programme, so that students are initiated into this form of active and self-regulated learning at the start of their university career, with the relevant scaffolding provided by the teaching team. With each further enquiry-based learning activity, the complexity of the brief should increase while the scaffolding provided is decreased. In the latter stages of the programme, the scaffolding should be completely removed to enable and empower students to become fully independent learners who have the capability, ie the metacognition, to recognise what they need to do to address the problem/challenge, regardless of the context.

Conclusion

The 21st century poses a range of challenges to both individuals and society. An increasingly diverse student population choose to face the financial burden of a higher education because of its promise to lead to a good career. It is, therefore, essential that universities recognise their responsibility, to both students and society, in preparing students accordingly for the world beyond. This paper has argued that this is best achieved by designing inclusive curricula through which all students can engage in and benefit from significant real-world experiences that develop a range of transferable competencies. Making the transition to this more active and authentic approach to learning and teaching can feel

daunting to course teams, as it requires more consideration and preparation. However, it can be successfully achieved through collaborative partnership between academic and professional service teams, such as the Careers Service. The benefits of this approach for students, staff, the university and external partners are numerous when applied in a strategic and coordinated manner.

Author biography

Aranee Manoharan is an HE professional with experience across academic and professional services in teaching, student success, careers, and educational development. Informed by the philosophies of universal design, culturally responsive practice and capability approach, she specialises in integrating employability into the curriculum through high impact pedagogical approaches and assessment methods to design more inclusive curricula that prepare all students with the knowledge, skills, and significant experiences to achieve their aspirations. A committed advocate for inclusion and social mobility, Aranee's work emphasises the importance of building students' social and cultural capital through community-engaged, real-world learning.
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Sticking plaster or long-term option? Take-home exams at Heriot-Watt University

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Abstract

This paper explores the implementation of take-home exams at Heriot-Watt University: open-book, uninvigilated, open-web exams taken over a 24-hour period. Drawing primarily on a university-wide student survey, but also on three projects focused on particular parts of the university, the paper provides a picture of the impact of take-home exams at Heriot-Watt. The findings suggest that, while take-home exams have important benefits over traditional exams, students need support to understand the assessment requirements in order to manage their time and effort.

Introduction

A university since 1966, Heriot-Watt is based outside Edinburgh in Scotland, with additional campuses in Dubai, Malaysia, the Scottish Borders and Orkney. Like many universities around the world, since March 2020 Heriot-Watt has needed to find alternatives to in-person exams. While there has been some shift away from exams in favour of continuous assessment, courses have also made use of a replacement exam format: 'take-home exams', as used by Heriot-Watt, are uninvigilated, open-book, open-web exams (meaning students can access resources on the internet rather than being limited to their own notes) taken over 24 hours during the exam period, with papers accessed and scripts submitted online. This is in line with the use of 'take-home exam' in the research literature (eg Lopéz et al, 2011; Bengtsson, 2019; Coe and Dagilyte, 2019).

The introduction of take-home exams at Heriot-Watt was an emergency measure designed to allow courses to use exams within the constraints created by Covid-19. However, these kind of exams have been used for a number of years as an assessment format in their own right, and have been the subject of both academic research (eg Bengtsson, 2019) and practical guidance (LSE, nd).

A number of benefits of take-home exams have been identified. Open-book exams in general, and open-book, open-web exams in particular, have been characterised as more likely to resemble the professional world than traditional exams (Williams and Wong, 2009; Johanns et al, 2017; Moore, 2018). Advocates of open-book exams as far back as the 1930s identified the reliance on memory as a key flaw in traditional exams (Stalnaker and Stalnaker, 1934). More recent empirical research has found that students are more likely to adopt deeper approaches to learning with open- than closed-book exams (Theophilides and Dionysiou, 1996; Myyry and Joutsenvirta, 2015) and that students who normally adopt deeper approaches preferred open to closed-book exams (Karagiannopoulou and Milienos, 2013). Similar results have been found for take-home exams (Lopéz et al, 2011; Bengtsson, 2019).

There is a broad consensus in the literature that open-book exams involve less anxiety for students than closed-book exams (Theophilides and Dionysiou, 1996; Myyry and Joutsenvirta, 2015) and that the same is true for take-home exams (Bengtsson, 2019). However, that picture has been complicated by evidence that, for example, "students associate [open-book exams] with less anxiety, but only a minority of students actually report lower anxiety" (Durning et al, 2016, 586).

The inclusivity of assessment is an important feature of good assessment design (Keating, Zybutz and Rouse, 2012), and research has highlighted the benefits offered by take-home exams, such as the flexibility of exam location (Williams and Wong, 2009) and students' ability to prepare notes and other aids they may need (Wood and Gibbs, 2020). De Silva and Robertson (2020) found a number of ways in which take-home exams can be more inclusive than traditional exams. The need for individual adjustments such as additional time and exam breaks is reduced, and it is easier for students to use many assistive technologies, such as speech to text software. However, they also highlight risks, such as unequal access to suitable home environments and stable internet connections, and the unfamiliar nature of the assessment causing additional challenges for some students (such as those on the autism spectrum).

Previous research has found that students tend to prefer both open-book exams (Karagiannopoulou and Milienos, 2013) and take-home exams (Williams and Wong, 2009; Lopéz et al, 2011) to traditional exams. However, this is inevitably complicated by discipline: Iannone and Simpson (2015) found that maths students at two different UK universities actually preferred traditional closed-book exams to any other common assessment format.

This article explores the implementation of take-home exams at Heriot-Watt University. The primary focus is an analysis of student feedback from a university-wide survey in December 2020, undertaken by the lead author. To supplement the primary focus, and to give a broader perspective on take-home exams at Heriot-Watt, the paper also includes – in the pull-out text boxes – vignettes of research projects carried out in 2020 by the other three authors, as part of undertaking the Postgraduate Certificate in Learning and Teaching. These projects explore the impact of take-home exams in specific parts of the university. David Brown and Abdelrhman Yusuf surveyed students in particular subjects – Chemistry and Marine Sciences, and Accounting, Finance and Management, respectively – about their experiences of take-home exams in May 2020. Olga Potapova-Crighton sampled scripts from recent years of a postgraduate course, to compare students' performances in traditional and take-home exams.

Data

The Course Experience Survey was administered between 16 December 2020 and 17 January 2021, and included a question asking students whether they had sat a take-home exam that semester. Those who replied in the affirmative were then asked a short series of closed questions about the length of time they spent on the exam, the benefits and difficulties they encountered, and a simple open question: "Do you have any other comments about take-home exams?". All 14,383

undergraduate and taught postgraduate students were invited to complete the survey, and 4025 (28%) responses were received. Of those, 3291 reported that they had sat a take-home exam that semester. And of those, 1246 responded to the open question.

Vignette 1: Comparing Chemistry and Marine Science students' perceptions of traditional and take-home exams

In his investigation of students' perceptions of the Covid-19 response, David Brown found balanced views of the take-home exams. Twenty three students (from a population of 83) from Chemistry and Marine Science programmes responded to a questionnaire asking for their views. A clear majority of students (85%) felt that the take-home exam was a positive experience, and around half reported that they preferred the take-home exams to a traditional exam format. The positive perceptions of the take-home exams mainly related to the additional time available. Concerns about the take-home exams included having too much time to think and worry about their answers, and the challenges of maintaining motivation during the take-home exam period.

Findings

Advantages of take-home exams

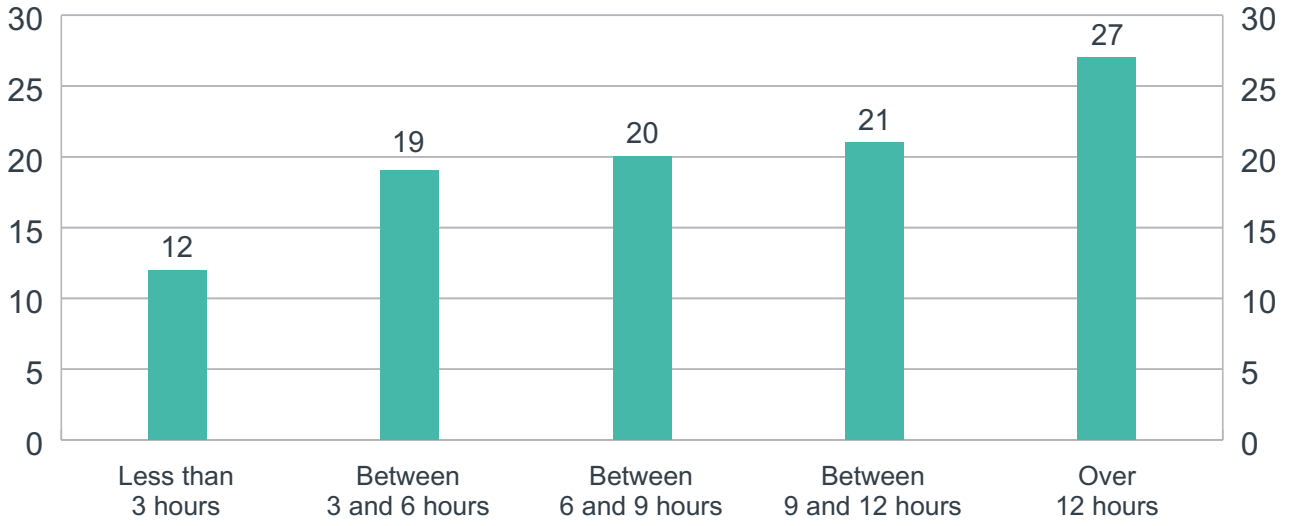
The university-wide survey found a balance of views about the value of take-home exams. On one hand, over half (59%) of those students who responded to the open question made comments that were broadly negative, while only a quarter (26%) made comments that were broadly positive. However, of the 142 students who expressed a direct preference one way or another, three-quarters (75%) preferred take-home exams over traditional exams. The most commonly cited benefit was the reduced stress and anxiety associated with the exam. The increased time period, being in the comfort of their own personal space, and the opportunity to take breaks, were all attributed with reducing the exam anxiety.

Students also perceived less of the unhelpful reliance on rote learning that they associated with traditional exams. Instead, the take-home exam was felt to test students' ability to apply their knowledge. Some students also felt that the take-home exams better resembled the kinds of challenges encountered in 'real world' employment contexts.

Long hours

A clear challenge encountered by students was the length of time they spent working on their exam script. Although a university-wide policy was adopted and communicated to students stating that students should not be expected to work for longer than for a traditional exam (three to four hours), many students reported working far longer (see Figure 1).

Figure 1: Time spent on take-home exams (proportion of respondents selecting each option)



Many students (88% of respondents) reported spending more than three hours on their take-home exam within the 24-hour window. A quarter of respondents reported spending over 12 hours on their exam, well beyond the published expectation. Many students commented on the discrepancy between the advertised expectation and what they found to be the reality. The longer that students reported spending on the exam, the more likely they were to make a negative comment. Of those who reported working for over 12 hours (26% of respondents), 69% of those who made a comment made a negative comment; and 40% of them made a negative comment specifically about the length of time they worked on the exam.

Students highlighted a number of problems caused by the length of time they ended up working on their exams. Firstly, there was the simple exhaustion of working intensively over a long period of time. Students talked about the impact on sleep of working long hours. Not only did some students simply work so long that finding time in the 24 hours to sleep was a challenge, it also caused problems for students in particular time zones. The 24-hour exam period ran from 9am in the UK, which corresponded to 5pm in Malaysia; and some of the Malaysia-based students encountered difficulties with working through the night. Finally, working for many hours on the exam made having exams on consecutive days difficult.

High expectations

Some students seemed to have worked very long hours because of a perception that the marking standards were very high. There were many comments that the exam questions were overly challenging. Some students felt that while the papers would naturally be more challenging as they were open-book, levels of difficulty went beyond what they had expected. Very few students provided much detail about why they felt the assessment was so difficult, and there was no consensus. Students talked about issues such as the high number of reflective and discursive questions, the absence of the usual 'easy' questions based on factual recall, more complex questions, having to go beyond their notes, and the need for referencing.

There was evidence that word counts were key influences on students' perceptions of the challenge of take-home exams. The longer the students spent on the exam, the more likely they were to mention the word count: of the students who reported working for more than 12 hours, 10% of those who commented mentioned the word count; the equivalent figure for those who reported working for three to six hours was only 2%. Many students felt that the standard expected was more akin to a continuous assessment than an exam, with word counts similar to coursework, but with a fraction of the time to complete the task. The requirement for students to provide references in their exam scripts – an institution-level policy decision – also seems to have created a perception of coursework-level expectations.

Vignette 2: Evaluating student performances in take-home exams

Olga Potapova-Crighton compared students' performances – the length, content and quality of answers – in traditional and take-home exams, focused on the Environmental Impact Assessment course taken by taught postgraduate students. Run in August 2020, the exam paper had the same structure as in previous years: some short-answer questions based on legal knowledge and definitions, and longer essay-based questions. An analysis was conducted using 30 submitted scripts from three different years: 2018, 2019 and 2020. In 2018 and 2019 the exam was undertaken in traditional exam conditions. The analysis found no statistically significant difference between the different years for either the average mark, or the average word count. While the quality of answers was not different for the take-home exams, there was evidence of improved referencing. This study concluded that the take-home format was suitable for an exam of this sort.

Unclear expectations

Some students felt that expectations for the exam were unclear. Students referred to the difference between the take-home exam and the past papers and tutorial questions, the lack of a practice or mock exam, and the lack of a sample paper and answers. Some students cited the unclear expectations to explain why they spent so long working on the exam. Uncertainty about standards led some students to feel it necessary to make use of the time available.

Discussion

The benefits of take-home reported by students in this study largely align with previous research, in terms of real-world relevance, less emphasis on memorisation, and reduced exam anxiety. As with previous research, there was evidence in this study that students preferred the take-home exams to traditional exams. In David Brown's research with Chemistry and Marine Science students at Heriot-Watt (Vignette 1) around half of students preferred the take-home format. Abdelrhman Yusuf (Vignette 2) also found Accounting, Finance and Management students to be generally positive about take-home exams.

A key finding from this study is that students report spending very long periods of time on their take-home exam, well beyond what was said to be necessary. This evidence is hard to connect to the existing research literature on take-home exams. Most open-book exams are of similar duration to conventional exams, while take-home exams have typically had 48-hour periods or longer, rather than the 24-hour period used at Heriot-Watt. However, Myyry and Joutsenvirta (2015) did find that 55% of students reported taking longer to complete an open-book, open-web exam compared to a traditional exam, and only 5% reported taking less time.

The suggestion that students were required to work for such long hours to complete the assessment raises serious concerns about the inclusivity of take-home exams. For those students with caring or other responsibilities, spending so much time on the exam may be impossible, potentially putting them at a disadvantage. Previous research on take-home exams has highlighted the additional challenges faced by students with children in making use of the flexibility of taking a three-hour exam within a 24-hour window (de Silva and Robertson, 2020). The findings from the present study raise the possibility that such students are at a further disadvantage.

Vignette 3: Accounting, Finance and Management students' perceptions of take-home exams

Abdelrhman Yusuf undertook a project investigating student' perceptions of take-home exams. Fifty students from Accounting, Finance and Management completed a questionnaire exploring several aspects of students' experiences of take-home exams, including their validity, practicality and reliability. The findings indicated that students' readiness and perceived social support from the university and staff significantly affected their perception of the take-home exam, but students' demographic characteristics (ie gender, subject) were not significantly related to their responses. Students' perceptions of take-home exams were generally positive, but there were concerns around their reliability and security. Furthermore, most students believed that technical problems and lack of access to the necessary tools (eg appropriate equipment and good internet connection) made the take-home exams impractical.

A key factor in students working those long hours appears to be both high expectations and unclear expectations. There is an extensive literature on the importance of helping students to develop an accurate understanding of what is expected in assessments (eg Sadler, 1989; O'Donovan, Price and Rust, 2008). While students will, over time, develop a better understanding of what is expected in assessment formats that are used commonly in their programme, assessment formats used rarely will be challenging. Take-home exams provide an extreme example of this. While some (though not many) students will have encountered open-book exams, very few will have encountered open-book, open-web, uninvigilated exams taken over a 24-hour period. Students' comments contained a number of suggestions about how they could have been better prepared for the take-home exams, and these suggestions align with the literature, including the use of exemplars (Carless and Kennedy, 2017), clear marking criteria (O'Donovan et al, 2001) and purely formative practice assessments (Yorke, 2003).

It appears that in the absence of these kinds of preparatory mechanisms, students focused on particular cues when gauging the expectations: the word count, the 24-hour exam period and the requirement for referencing. Ironically, the word counts were introduced in order to help students to limit their effort, and to manage the marking burden. However, in the absence of other information, students interpreted them as targets, and many students came to believe that the take-home exams were asking for a standard of work equivalent to a coursework assignment, but with much reduced time to complete it. And whatever the intentions of the referencing policy may have been, there is evidence that students interpreted it as indicating that exam answers required the kind of additional research expected of coursework.

Conclusion

This article has discussed the implementation of take-home exams at Heriot-Watt University, drawing primarily on data from a university-wide survey but also presenting summaries of more focused projects. Students' perceptions reflected the previous research on the benefits of take-home and other kinds of open-book exams cited earlier. There was considerable support from students for the continued use of this exam format: 10% of those who commented on their take-home exam expressed an unprompted preference for this format over traditional exams.

However, students' feedback highlighted some drawbacks, most conspicuously the long hours that many of them spent on their exams, at some cost. The 24-hour period was introduced as a way of accommodating different time zones, challenges that students might experience in finding a quiet space to work, and any technical obstacles to downloading and uploading material. During the pandemic, extended exam periods have been used for this reason by a number of institutions (Baume, 2020; Wood and Gibbs 2020). Students were provided with some indication of how long they were expected to work, another decision shared with other institutions (Sambell and Brown, 2020). However, many students were either so unclear what was expected that they felt they had to use the time available, or they interpreted the word count and open-book format to imply very high expectations. The findings show the limitations of explicit communications in the face of implicit signals and powerful incentives.

The following recommendations are offered as ways of minimising the drawbacks of these kinds of take-home exams:

+ ensure that expectations are made as clear as possible. For example, where there is a requirement for referencing, explain that this does not imply that coursework-type research is necessarily required. Where there is a word count, explain that this constitutes a limit to help students to manage their time, not a target
+ provide opportunities for students to develop a practical understanding of the assessment requirements. Consider running practice versions of take-home exams, and discussing sample exam questions and model answers in class
+ it is important not to overestimate the influence of suggestions and recommendations in the face of powerful grade-related incentives. Therefore, while there are strong arguments in favour of exam periods of 24 or 48 hours, shorter exam periods may be necessary to limit the amount of time students spend on the exam.

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Embedding equity and inclusion in higher education assessment strategies: creating and sustaining positive change in the post-pandemic era

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Abstract

This paper explores inclusion and equity in assessment in the pandemic and post-pandemic era. The paper outlines the context of the switch to online learning and addresses the major equity issues that emerged in this switch: online timed exams, proctoring and the impact on student mental health. The paper then suggests principles of inclusive assessment, developed from the Universal Design for Learning framework and placed within the context of the impact of Covid-19. Finally, the paper outlines how positive changes to introduce diversity and choice of assessment might be sustainable in the future through provision of case studies for academic staff to realise change in their assessment practice and through collaborating on a programmatic approach to assessment.

Introduction

Embedding equity and inclusion into the fabric of a higher education institution (HEI) is a long-term change programme requiring a whole-institution approach with support from senior leadership and commitment from faculty and staff (Kelly and Padden, 2018). While incremental and cumulative change has been taking place in the higher education sector over many decades, a point has now been reached where the substantive change necessary must be strategically managed to create a fully inclusive educational environment providing equitable opportunities to succeed for diverse student populations. The move to online education has provided a potential catalyst for what may be described as the most seismic change to higher education in many decades (Resnick et al, 2021; Zhu and Liu, 2020; Jones and Sharma, 2020). So, how can this moment of change be leveraged to progress inclusion in the sector?

The switch to online learning has widened the existing digital divide for many (Reich, 2020) but in many ways it has also made our most vulnerable students more visible than ever to faculty and institutions more widely. The most vulnerable and marginalised in our societies, after all, have been shown to be disproportionately impacted by the pandemic (Devakumar, Bhopal and Shannon, 2020; Bowleg, 2020). Looking at students with disabilities as an example, those who were provided with educational support workers by disability services were suddenly faced with studying alone at home, forcing educational institutions to integrate embedded solutions to support students (an example of this is the addition of read aloud functionality to virtual learning environments to accommodate those students who would usually have an in-person or electronic reader in an exam hall). Specific guidance was provided by many state bodies and educational institutions on how to ensure students with

disabilities were accommodated sufficiently (Reich et al, 2020). This crisis thus created a context in which mainstreaming inclusive practice was immediately necessary. Of course, students with disabilities are just one of the groups in our universities who required additional supports as a result of the crisis the pandemic created. Students without digital access, because of financial need, geographical location or a digital skills gap, also required immediate and additional supports. Additional funding was made available in the Irish higher and further education sector to facilitate technology access and additional supports for students (Higher Education Authority, 2020), and it became clear that the previous assumptions made by some about so-called 'digital natives' were not accurate (Ali, 2020). The higher education sector also had to look for solutions to accommodate our international students within our globalised institutions (El Masri and Sabzalieva, 2020). Many asked where they were supposed to go as countries closed their borders and some students were asked to vacate on-campus accommodation. Could they study effectively from another time zone?

With these questions emerging almost overnight and the traditional systems now not fit for purpose, educators experienced an uncomfortable shift to a 'new normal' (d'Orville, 2020). The principles of Universal Design offered educators a framework to aid in the design of this new educational environment (Havens, 2020). The adaptation of our assessment strategies, the focus of this paper, has already begun in earnest.

Inclusive assessment – diversity and choice of assessment

Perhaps the most significant change to assessment during the Covid-19 pandemic has been the elimination of mass, timed, in-person examinations. Fuller et al (2020) describes this as our potential TINA (there is no alternative) moment to enhance assessment practices in higher education. Reducing the potential negative mental health impact of assessment should be a priority now, more than ever. Student mental health was impacted negatively during the pandemic with increased levels of depression, stress and anxiety (Huckins et al, 2020; Son et al, 2020), making this an excellent moment to address the potential negative impact which some teaching and assessment practices can have on the mental health of students. It has been noted that the stress of the pandemic likely led to a negative impact on student performance in assessment tasks (Reich et al, 2020). Alternatives to timed in-person exams were necessary but the nature of the alternatives provided differed greatly and not all faculty had inclusion and equity in mind when redesigning strategies. However, the move to continuous assessment and other methods which did not simply mirror the traditional exam in an online format resulted in more inclusion for students with varying learning preferences. Struyven et al (2005) demonstrated that these 'alternative' methods of assessment are perceived as fairer by students than traditional memorisation tasks or 'cramming' for exams.

While some faculty chose to use alternative assessment methods at the end or during the semester, others moved their traditional timed exam to a similar method: an online timed exam. Keeping teaching and assessment strategies as familiar as possible can have positive outcomes (Zhao et al, 2002) but method and context have to be considered, and those working in higher education have now learned that the movement from in-person to online takes careful planning and often a significant change in approach. Feedback collated by the Access and Lifelong Learning student support unit in University College Dublin showed that the mass move to online exams in May 2020 led to some confusion for students as these approaches were referred to simultaneously as synchronous exams, live exams or, at times, as take-home exams or open-book exams. The insistence on online timed exams brought particular difficulties for many students with disabilities who required reasonable accommodations/adjustments. While extra time was reasonably easy to facilitate through many virtual learning environments on which assessment was carried out, other supports such as a reader were not as easy to replicate for students working online at home. Those without a good quality internet connection also experienced challenges as connections dropped and systems crashed. Many educators also saw students without study space and those with caring responsibilities unable to engage equitably in live timed exams.

In the realm of assessment, online test proctoring became, and remains, an issue of equity and inclusion (Swauger, 2020). Among the potential issues with the use of proctoring software is the possible detection of 'suspicious' behaviour associated with some disabilities as well as the obvious privacy issues when software records video, audio and behaviour. Some academics attempted to provide local online proctoring solutions by monitoring students over video calls – again privacy issues are to the fore in discussions on this approach. Of course, if 'cheating' is the predominant concern, then there are a number of pedagogically sound assessment methodologies which can be deployed to address this issue and support students' academic integrity (Nguyen et al 2020; UCD T and L, 2021), without relying on expensive and/or ethically questionable technologies. Research by Woldeab and Brothen (2019) also showed that online proctoring does impact on student anxiety levels and can negatively impact student performance, particularly for students who experience anxiety in their daily lives. The higher education sector has now seen changing opinions on whether or not students should be expected to turn on their cameras in the virtual classroom, with opinions changing from the necessity to see our students' faces to understanding the many equity issues which may mean turning on the camera became exclusionary (Castelli and Savary, 2021). It might be expected (or hoped) that the rush to use proctoring software will see a similar tempering in the coming months and years.

Inclusive assessment and feedback – Universal Design for Learning

Universal Design for Learning (UDL) provides a useful framework when considering the creation of inclusive assessment and feedback strategies (CAST, 2018). UDL advocates for flexibility in approach in all aspects of teaching and learning activity, including assessment. Educators should seek to provide students with multiple means of action and expression. In other words, higher education should be providing choice, diversity and flexibility in how students are assessed. There is no one size fits all solution, rather the diversity of our student population should be considered and an environment that facilitates all students to thrive should be created. This can be done by considering the varying ways students could demonstrate how they have met the learning outcomes set. If the teaching goal is for students to develop their critical thinking, then the assessment goal must be that they can demonstrate that this has taken place without undue burden.

Having mapped the relationship between Universal Design for Learning (CAST, 2018), Universal Design for Instruction (Burgstahler, 2015) and principles of assessment and feedback (National Forum, 2017; O'Neill and Maguire, 2019; UCD T and L, 2019), Padden, Tonge, Moylan and O'Neill (2019) suggest a list of inclusive assessment and feedback concepts and principles. These principles add to previous research and guidance on inclusive assessment and feedback (Thomas and May, 2010; McArthur, 2016; Hanesworth, Bracken and Elkington, 2018). In the post-pandemic era the following principles are arguably the most immediately relevant:

+ **Diversity of assessment** – this involves moving away from an over-reliance on 'traditional' assessment types. Diversity of assessment, also referred to as variety of assessment, is most successfully implemented at programme level (UCD T and L, 2019). The programmatic approach to assessment allows for efficiencies and resource sharing (Knight, 2000) creating maximum positive impact for students without an onerous workload for educators. Thomas and May (2010) note the need for HEIs to question "the principles, reliability and fairness of traditional forms of assessment" stating specifically that "a range of assessments at the programme level can benefit all students and minimise the need for alternative assessments for particular individuals or student groups" (ibid, 14). Scaffolding, discussed below, is vital when introducing new methods of assessment, and particular care should be given in circumstances where students are already experiencing heightened levels of stress and anxiety, such as in the pandemic era.
+ **Choice of assessment** – choice of assessment refers to all students having a choice from a pre-determined (or negotiated) choice of assessment methods within a module (O'Neill, 2011; 2017). Considerations should be given here to providing examples of more unfamiliar or 'diverse' methods of assessment and it is recommended that a choice of two methods be provided giving clear instructions and a rationale (O'Neill, 2011).

- **Clarity of assessment strategy and goals** – students should know from the outset how they will be assessed and why they are being assessed in this way. Educators must trust students as partners in their learning journey and any element of 'surprise' assessment strategies erodes that trust. This clarity became more necessary than ever with the move to online and distance learning where the ability to engage with peers and ask questions was diminished in many cases.
- **Reducing assessment load** – careful attention should be given to student assessment workload and, where appropriate, assessments should be reduced (UCD T and L, 2019). A large-scale study of the student experience during the pandemic (Aristovnik et al, 2020) has shown that that the majority of students perceived a higher workload. A sharp increase in workload was also reported by many faculty, creating an opportunity to examine assessment load and streamline where possible, to the benefit of all parties. Programmatic mapping of assessment can assist with the process of gaining visibility of student workload and increasing awareness of competing demands placed on students (O'Neill and Maguire, 2019).
- **Scaffolded assessment** – assessment should be 'scaffolded' by supporting students to become proficient in the varying assessment methods used within programmes. It cannot be assumed that a student can write an essay, do a presentation or that they understand how to tackle a 'single best answer' approach unless this skill has been expressly taught. When setting an assessment method there is a responsibility to provide support to students in gaining these necessary skills. An approach where educators work as part of a programme team to build in skill development collaboratively across programme stages is an excellent way to ensure that this is done with clarity for students and without duplication of effort for faculty. This means collaborating with colleagues across a programme to ensure that key skills are being taught at every stage. This can also facilitate sharing of resources, rubrics and examples (Padden, O'Connor and Barrett, 2017).
- **Self-assessment** – the UDL framework asks that educators provide opportunities for students to self-regulate and reflect. Providing students with opportunities to engage in self-assessment has a number of potential benefits as it "improves performance, enhances lifelong and deep learning, social competencies, makes students participate in learning, develops their autonomy, make them feel that they can control their own assessment and decreases student anxiety" (Papanthymou and Darra, 2018, 131).

Sustainability of diversity and choice of assessment

What can educators do to ensure that the positive changes to assessment which have begun are sustainable over time? In recent research on the barriers and enablers of diversity and choice of assessment, it was noted that a key enabler for embedding diversity and choice of assessment is the provision of case studies, especially those which are discipline specific (O'Neill and Padden, 2021). Collections of case studies which focus specifically on inclusion, equity and UDL can provide opportunities to share good practice and highlight the importance of inclusion as a central tenet of educational practice (Padden et al, 2017; Padden et al, 2019).

In this research on the barriers and enablers of diversity and choice of assessment, "(44%) of those who gave examples of diversification, and six (20%) of those who gave choice of assessment examples, introduced them due to Covid-19" (O'Neill and Padden, 2021, 6). This research explored, in part, the extent to which the diversification of assessment methods is done in isolation or is part of a wider consultation with a programme team. The participants who diversified were asked about the extent to which they discussed this change with others in the programme beforehand (ie their programme director, head of school, other colleagues, students). Fourteen percent (n=21) highlighted that they did 'a lot', or 'a great deal', 13% (n=35) said a 'moderate amount', but a large proportion, 73% (n=60), indicated they did 'a little' or 'not at all'. To ensure a more programmatic approach, dialogue with others is key. However, although survey respondents had limited dialogue with the programme team, 75 staff (75%) considered either the stage or programme outcomes before they made the change. The institution within which this research took place had recently undergone an institution-wide focus on programmatic approaches to assessment (UCD T and L, 2019). It was disappointing to find that many of the staff did not discuss their implementation with other staff. It may be that despite best efforts of the institution, the modularisation of the curriculum is still driving isolated design of assessment. This was not the case for all staff, but a significant portion had either 'very little' or 'not at all' dialogue with their colleagues. This has implications in relation to students' familiarity with the approaches and with taking a more programmatic approach to the implementation of assessments.

Conclusion

Experiences during the pandemic have shown that it is possible to radically change practices in higher education. While the circumstances of those changes were far from ideal, it is clear that systemic rapid evolution is possible in this sector, especially when all educators are making changes simultaneously. It has been argued that the higher education sector will not be returning to a pre-pandemic educational environment and, at the very least, colleges and universities will now need to meet the needs of those students who wish to remain studying online and at distance (Blakenberger and Williams, 2020). But what have the lessons been for inclusion and assessment, and how should the higher education sector now create a new landscape in order for students to succeed? It is clear that when designing, or redesigning, our assessment strategies the diversity of our student population must be considered. Educators must interrogate whether the 'familiar' assessments used meet the needs of all learners, and if they are not fit for purpose then it is time to diversify. Designing for those previously perceived to be on the 'edges' of the classroom, virtual or tangible, will create an inclusive experience for all. The UDL approach provides educators with a sustainable framework on which to build the higher education experience of the future and it is clear this building must be done together – in a programme or institutional approach. It is the responsibility of every educator to ensure that no student is left behind in the pandemic and post-pandemic era by embedding flexibility systemically. This flexibility will also ensure that the higher education sector is ready to respond swiftly and seamlessly in the event of a crisis such as this in the future.

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Assessment insights from the margins: garnering the views of disabled learners through Lesson Study

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Abstract

This study uses the methodology of Lesson Study (LS) to explore the perspectives of three level five university students regarding their experiences of assessment on a research methods module. The students had self-identified certain characteristics: all had a cognitive or neurological disability, and all identified as being the 'first in family' to have attended university. Data was analysed from three rounds of LS sessions with the students, and various themes emerged. Many of these reflected previous findings in the research literature, but a closer reading of the data revealed facets that might otherwise have been 'occluded' from view had not such a research process occurred. A tentative framework using the notions of 'proximity' and 'perceptibly' that may help staff consider factors impinging on assessment and learning requirements of such students is proposed. This study took place prior to Covid-related adjustments. However, the affordances for LS to positively inform anticipatory assessment design is suggested as one means to further enhance strategies for strengthening assessment literacy. Emerging from the findings, further suggestions are provided to better enable staff to understand and meet the assessment needs of disabled students, and/or those who may be otherwise marginalised, particularly in blended or hybridised learning environments.

Rationale and conceptual frameworks

There are persistent gaps in higher education (HE) with recruitment, progression and attainment of learners with disabilities in both Brazil and the UK (Equality Challenge Unit, 2016; Mountford-Zimdars et al, 2015; INEP, 2018). In São Paulo, Malheiro and Schlünzen (2019) revealed a systemic paucity of information regarding the experiences or outcomes of disabled learners. Nor is adequate information available regarding the detail and nature of university strategies designed to strengthen learner retention and attainment (Schlünzen, 2015). Although there is an emerging body of research pertaining to the assessment outcomes of disabled learners (for example Lombardi et al, 2018), much of this is focused on investigating the application of specific assessment tools rather than ascertaining the views and experiences of the learners. The move towards blended delivery may further hinder inclusive learning experiences for learners with disabilities (Office for Students, 2020; UNESCO, 2020). Despite an emerging research base (Ortuño and Serrano, 2020; Pearson et al, 2019), the sector lacks robust insights regarding how blended learning experiences impact on the learning of students with disabilities and those who have been marginalised (Coy et al, 2014, 64). To amplify the

voices of disabled learners regarding their experiences in HE, Hanesworth, Bracken and Elkington (2018) encouraged practitioners to expand the use of practice-based research methodologies to bring to light the lived experiences of marginalised learners through iterative explorations of their learning and social journeys. The conceptual framework underpinning the research discussed below was informed by McArthur's concern for the creation of a socially just approach to assessment (2018, 2020). This was further complemented by a concern to inform future assessment design by anticipating student learning requirements from a Universal Design for Learning (UDL) perspective.

Research design and methods

To address these issues, LS was identified as a research method with potential to reveal how lecturers and learners negotiate their ways through learning and assessment processes. The approach has currency within compulsory education settings, and within teacher education (Godfrey et al, 2019; Lee and Tan, 2020; Ni Shuilleabhain and Seery, 2018), but not across the wider HE sector.
LS involves:

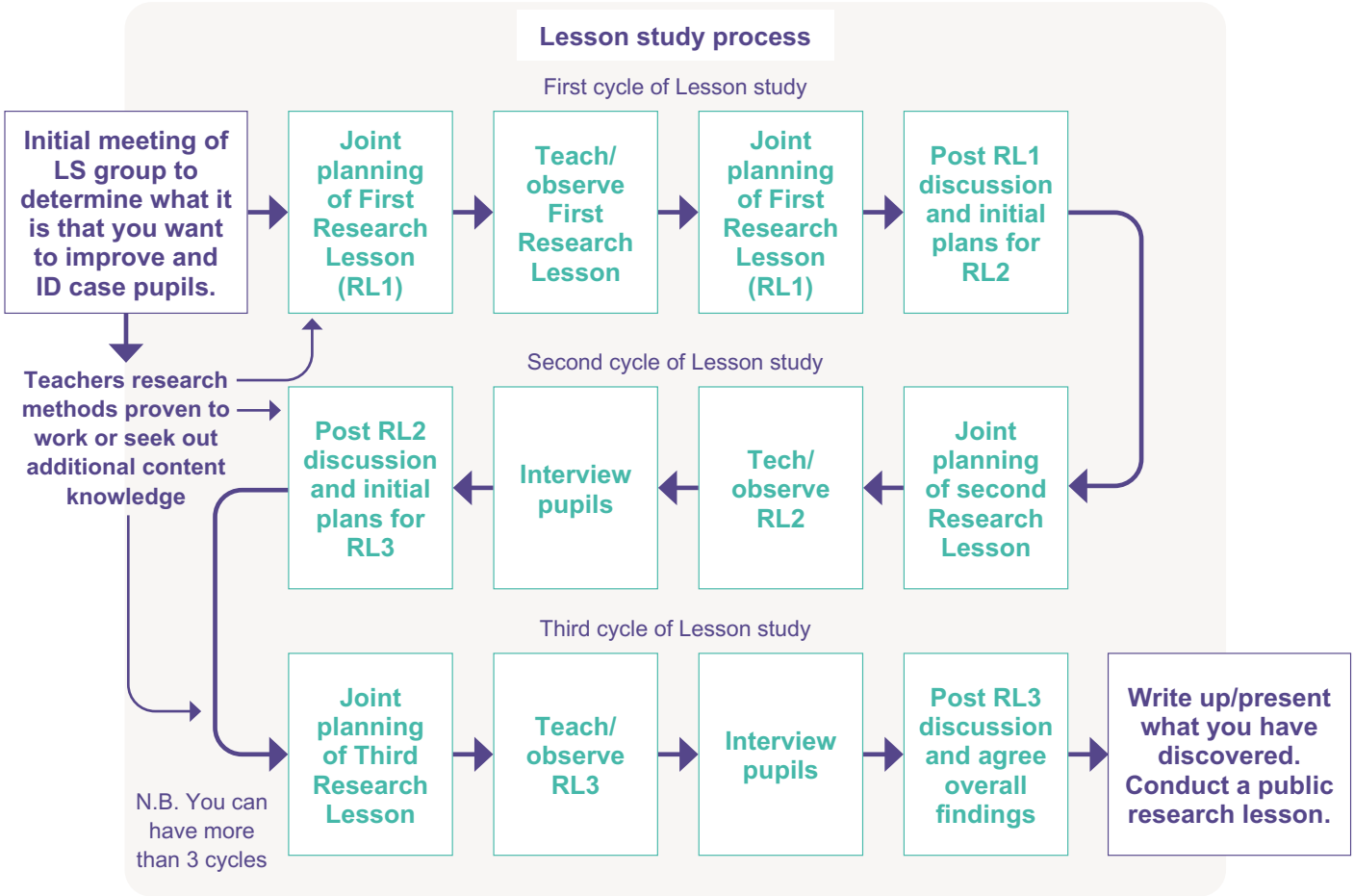
1. Collaborative design of lessons or units of study (the specifics of who participates are generally determined by the local context and requirements)
2. Execution of the design with observation
3. Joint reflection on the learning processes with a view to embedding iterative strengthening and improvement.

Central to this process are the experiences of learners, and as learner voice is increasingly recognised as pivotal for informing inclusive change within HE (Canning, 2016; Johnson et al, 2018; Seale, 2010, 2015), there is potential for LS research to provide much-needed insight into what works on the ground (Seale, 2013).

The small-scale research project reported here was made possible through a British Academy grant, which funded the project at one university in the state of Sao Paulo and one in the UK. Findings from the experiences of colleagues in Brazil were shared in a paper published by Pinheiro de Olivera, Bracken and Nakano (2021). The latter focused primarily on identifying different learning strategies that all learners shared as helpful in facilitating the learning process, whereas the findings of the current paper are more focused on the life experiences of the learners concerned and their influences on the students' approaches to assessment. A key objective was to strengthen educator perceptions and understandings about these learners and how researcher practitioner knowledge, or lack of knowledge, about learners' experiences might affect assessment design, especially in contexts of blended or hybridised learning.

Importantly, in line with the principles of UDL (Bracken and Novak, 2019), the research team was purposefully constructed to incorporate a multidisciplinary dimension consisting of four colleagues: an academic module lead; a senior colleague from the Library and Information team; a senior colleague from the Student Services Disability team; and the academic project lead. The research design was cognisant of the desirability of strengthening stakeholder networks across the university to benefit from insights generated by inclusion of learner voice. Following LS guidance on process, as provided by Dudley (2011, see figure 1 below), these colleagues worked collaboratively to design and subsequently interrogate three consecutive iterations of a level five research methods module for a joint Education Studies and a Special Education Needs, Disabilities and Inclusion course. These teaching sessions were used to elicit responses from the research participants. The learner participants were three students who volunteered for the research: Catherina, Callum and Linda (anonymised). Early in the process, the participants openly and willingly shared key characteristics of their life histories and previous educational experiences. They all self-identified as having a diversity of cognitive and physical impairment, and as being the 'first in family' to attend university. Two had previously enrolled in other universities and dropped out, while the third identified as being a school refuser in secondary school. One identified as being a single parent. All three identified as being white British.

Figure 1: Lesson Study process (from Dudley 2011)



The university granted ethical approval prior to the research and, in keeping with discipline expectations, the research principles and processes were also informed by the Ethical Guidelines for Education of the British Educational Research Association (BERA, 2018). The underpinning research ethic was one of care and responsibility that sought to "achieve affirmative social transformations among, and on behalf of, all of those participating" (Dickens and Butcher, 2016, 531).

The three rounds of LS generated a rich range of data. This paper relies to a great extent on the transcripts generated from the group interviews with the students after each of the teaching sessions. These post-lesson discussions lasted from 20-35 minutes. A process of inductive thematic analysis was applied cognisant of Braun and Clarke's theorising of such as facilitating "a process of coding the data without trying to fit it into a pre-existing coding frame, or the researcher's analytic preconceptions" (2006, 83). This was done independently, and then individual perceptions and insights were shared. This allowed for an element of cross checking and consensual veracity regarding the key themes that emerged.

Findings

Initially, there appeared to be little that would not have been expected (though having expectations confirmed is useful in itself), and there were few entirely unifying themes. Each of the participants adopted different approaches to their studies. These were shaped by their individual pedagogical needs for what they deemed to constitute effective support and preferences.

Findings – general

In respect to feedback practices, there was consensus regarding the efficacy of short, 'checking in' informal quizzes during teaching sessions, as expressed by Catherina:

> "… So yeah, it was, I think it [the mini quiz] is good because it is interactive, if you have got people engaged and interactive, they are going to absorb a lot more but if it is chalk and talk…"

They also identified additional strategies that facilitated preparation for assessments, or ones that facilitated more immediate clarity regarding learning of content. These included:

+ the use of assessment exemplars from previous years
+ modelling the sort of research and analysis processes needed for the assignment from the lecturer
+ having links drawn consistently between content coverage and learning objectives / assessment
+ opportunities to sit in a room with staff, including an academic librarian, and have a go at finding and exploring literature suitable for their assignment while making a start on writing draft material.

They also deemed a session jointly facilitated by library and information colleagues along with an academic to be effective. According to Callum:

> "It was helpful [to have a librarian] because I had a question about page numbers … because I am doing a joint honours computing as well…"

They perceived assessment and feedback processes as being impactful when they are 'flipped' into the learning space rather than being compartmentalised into post-assessment discussions. These insights reinforce much of what is apparent in the current literature on effective assessment in HE (Biggs, 2012; Carless and Boud, 2018; Winstone et al, 2021).

Findings – more specific

There were further specific insights from the students, for example how they took advantage of the disability support available to them from the university. This varied from student to student. In the response below, Linda refers to an online notetaking device that facilitates her learning:

> "… because I've got fibromyalgia, I get foggy moments, … when I was at school, I could remember stuff, you know what I mean? If I had a history lesson, I was interested in, I could remember it all but now sometimes because I get foggy, those notes are my Godsend… So, I have to have those notes because the health condition … can make me foggy that I will forget."

Further supports were facilitated including the effective use of electronic and in-person peer groups to clarify understanding of content and assessment. The three said they were able to regulate their use of these if they perceived them to be less effective, for example when they 'turned into an echo chamber of panic' as one put it. All three were highly organised in advance in their approach to the module with a specific focus on the lead up to assignments, but they were also impacted by other events, which were sometimes beyond their control, as shared by Linda:

> "… it depends on life just because, it happens, now if I am being organised and the kids are all healthy and whatever else, you know…"

So, elements of assessment preparedness may be somewhat more unpredictable for learners with more 'complex lives', for example, for single parents who are more impacted by the vagaries of their children's wellbeing. All three realised there would be module content relevant to their future academic and professional lives that might not be relevant to the assignment specifically. Once again as shared by Linda:

> "… because I'm slightly older sometimes I'll think more and like because I have worked, I have done a lot of work on different workplaces, so different experience, so sometimes I will think, hang on a minute, how is this useful and how would I apply it, or whatever, but I think the younger students who have had a different experience, I hear a lot of them saying, 'why are we doing this? It is not even relevant, why are we doing it?' you know what I mean?"

For her there was a sense that not all content needed to be specifically linked with proposed assessment tasks, sometimes learning could be offered for its own sake rather than always being assessed. However, she recognised that not all students might share this view, especially those who may lack experience outside of formal education.

Findings – illuminating the margins

Everything noted above either reflected themes common to the literature, or to some extent could be perceived within 'plain sight' through standard interactions between staff and students. What the process of LS allowed was for issues that would normally be occluded to be exposed. Each of the students provided at least one insight that would not have been revealed had the research not occurred, especially as shared in the student-focused discussion after each of the teaching sessions. Such key points included:

The fact that Callum, a joint honours student in Education Studies and Computer Education, chose not to take advantage of support on offer from the university for IT hardware for use in lectures or seminars. The reason for this was that he walked a long distance to get to university each day and did not have money to spend on transport, nor did he want to carry a university laptop that distance. When asked if he would like to have his own IT to hand, he responded:

> "Yeah, I would have the laptop and I would have a smart phone as well."

Thus, despite completing a course concerned with IT, the student did not have access to the technology to assist with both content and process learning. Another student had only experienced negative sentiments and outcomes related to assessment at her secondary school, and this had had a profound impact on her own self-efficacy and her executive functioning when it came to issues of assessment:

> "When I was at school, I was a menace [laughter] I was always excluded from school before my exams, so I left school with no qualifications."

The third deliberately did not engage with materials prior to lectures lest she lost focus in the lecture itself due to a presumption of familiarity or lack of interest with the materials.

> "Because I think if I look at it and it is something that doesn't interest me then I will not turn up to the lecture…"

There is a presumption that making materials available in advance will benefit all learners, but learners approach these pre-posted materials in a diversity of ways, including non-engagement. So, it is necessary to scaffold the use of pedagogical materials made available on virtual learning environments.

The commonality or 'theme' between these three was not within the experiences themselves, but that these were issues not amenable to immediate observation without a purposeful interaction between staff and student such as that provided through the LS process. The discussion above suggested a tentative model involving a heuristic framework to explore issues impacting on assessment practices and outcomes for students from marginalised backgrounds. It considers both 'proximity' to staff intervention and 'perception', which is related to the ease with which an issue might be noted by staff.

Figure 2: A heuristic framework for considering factors impacting on assessment experiences.

Proximity/Perceptibility	Close (more amenable to staff action)	Distant (less easily amenable)
More easily perceived	*Quadrant 1* – Structure of module/of sessions Quality of assessment practices Support on offer Disability – classification	*Quadrant 3* – Disability – impact Influence of peer groups
Possibly more occluded	*Quadrant 2* – Feedback – instant/long term (impact of) Access to IT (inc. skills)	*Quadrant 4* – The impact of socio-economic situations Previous school / uni experience (e.g., fear of feedback) Choice of learning activity (don't read materials in advance – deliberately) Impact of home life (+ and -)

A particular factor might end up in various of the quadrants depending, among other things, on interrelationships between the characteristics of staff, students and courses. However, the framework may better enable colleagues to consider what is more amenable to change and what less so, and which of these might need to be actively sought out. It should also encourage colleagues to seek out information about learners on specific courses, so that potential barriers to learning can be identified and factored into the planning process.

Application and relevance to 'pandemic times'?

This study took place prior to the Covid-19 pandemic, in face-to-face settings. LS provided a useful means to explore factors impacting on assessment experiences for marginalised students both from students' and staff (academic and support) points of view. Its iterative nature allowed for a deep exploration of the various factors impacting on assessment experiences. Nevertheless, the 'pandemic era' produces extra sets of pressures (academic, social and emotional) on students (Kidd and Murray, 2020; NHS Digital, 2020). Related to this, much delivery has switched to a blended or distance mode.

The combination of the above may make it likely that more issues will appear in quadrants 3 and 4: in other words, further from staff influence and possibly more hidden from view. With this in mind it is worth considering the following:

+ What strategies might be deployed between students and staff to discern and influence such, particularly in regard to potentially marginalised students?
+ How might academic and support staff work effectively in tandem to address such challenges?
+ How can we continue to situate learner voice at the heart of our research (Seale, 2015)?

Lessons learned

LS proved to be an effective means for revealing issues pertinent to understanding assessment practice as experienced by marginalised students. There is some limited literature on the use of LS in distance education (Yursa, 2011; Sharma and Pang, 2015). LS is a resource intensive approach but other processes offer at least some of its advantages. Institutions of higher education could consider more team teaching on modules. This study points to the advantage of including staff from support services as part of this (Parkes et al, 2014, offer a useful framework for conceptualising such partnerships). Linked to this, an analysis of research on effective pedagogy in distance learning (Charbonneau-Gowdy and Chavez, 2019) indicates the necessity of support and flexibility from HE administration for academic staff. There is clear evidence as to what makes for good practice in terms of online teaching (see Mintz, 2020, for a summary). A crucial factor is the necessity of using various means to get to know students as individuals and engaging the affective domain. This is in keeping with conceptual frameworks such as UDL which seeks to facilitate multiple means of engagement. It is noteworthy that online and blended modalities for assessment and feedback offer certain affordances that might aid rather than hinder both perception and amenability to intervention. Anecdotally, it appears that some marginalised students prefer online delivery (James, 2020; Zhang et al, 2020) for reasons such as: it offers a measure of anonymity; staff can use available data available to track engagement of students; sessions can easily be recorded for future playback; and formative as well as summative assessment tools are a feature of the various virtual learning environments, which have the capacity to provide in-time feedback for student and staff.

Conclusion

There is currently scant literature exploring the perceptions of students with disabilities and other characteristics considered to be marginalising regarding their experiences of assessment and preparation for assessment in HE. LS proved to be a useful methodology to explore these. It was able to draw out various issues that might otherwise be ‘occluded’ by dint of their being highly individualised in nature. There is little literature on the use of LS in an online environment. It would be useful to explore this further within HE. There are other ways of replicating some of the advantages that LS brings such as organising team teaching in online settings, including the engagement of support staff.

Digital platforms also have various affordances regarding improved assessment practices, but research shows that the engagement with students at an affective level is key. It is also clear that anticipatory and inclusive assessment design may need to incorporate an increased capacity for flexibility in terms of time and in relation to expected assessment processes to accommodate learner variability. This approach has previously been advocated by Costa Renders et al (2020). The development of the proposed heuristic framework featured as an outcome of this research may further assist colleagues to extend consideration of the formative and summative learning requirements of disabled learners, which may not be immediately obvious.

Takeaway points

+ Use the heuristic framework suggested above to analyse what might be effective to improve course development and delivery.
+ Consider using an LS approach to explore areas that might be occluded from immediate view.
+ If LS is not possible, consider how elements of team teaching/peer observation/student feedback might be introduced to help illuminate student experiences further.
+ Consider working in conjunction with support staff (librarians and information specialists, student support services, learning technologists and others) in this endeavour.
+ When delivering online, plan to engage directly with the affective domain and to create a social dynamic between the students.
+ Ask the students directly which aspects of online learning they find more and less useful and engaging.
+ Discuss with IT support staff the features that digital learning platforms have that allow for insight into student engagement.
+ Consider carefully what learning should be assessed for the course: design in a diversity of ways in which students can demonstrate attainment of their learning outcomes.

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Encouraging co-responsibility: a tool for students' involvement in the assessment process

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Abstract

There are many questions to answer about how we can make assessments more inclusive and participative for students and teachers. This is especially the case in the current remote teaching context, which has shaken our ways of doing things, teaching habits and attitudes. Most teachers and lecturers aim for a balance between making assessments inclusive and safe, fair and authentic, and valid and real. They also aim to ensure student participation and keeping students motivated during the transition from an on-campus teaching scenario to an online/distanced process. This paper describes a tool developed to facilitate students' peer and self-assessment and complement traditional teacher-based approaches. We include a short example showing how this tool could be used, its features and adaptations for face-to-face and online teaching settings and how it benefits both students and teachers. A group of teachers at the Universitat Autònoma de Barcelona designed the tool, and students enrolled in Education Studies were participants in its testing.

Introduction

One year ago, in the spring of 2020, the pandemic brought about a new and unseen challenge for universities (and other educational institutions): moving to an online environment with which most were not familiar. This abrupt transition led to difficulties for both teachers and students as they made rapid adjustments to their teaching, learning and assessment practices. Assessment was probably the most affected process; most universities transitioned their model of assessing students on campus and in-person to ones that could be undertaken remotely.

Online assessments represented a milestone and test for most teachers. Teachers were required to reflect on the best way to ensure the balance between making assessments inclusive and ensuring that no student was disadvantaged by the crisis conditions while simultaneously securing the quality requirements of an authentic and valid assessment process (García-Peñalvo, Corell, Abella-García and Grande-de-Prado, 2021).

Moving assessments online has proved to be particularly challenging, with issues such as academic honesty, plagiarism and fairness arising. How can students deal with the changes and adjustments made? Did these formats limit or inhibit students' participation? How can teachers monitor students' progress and implications? In particular, are students autonomous enough to follow their learning process in an online setting?

To answer these questions, we presented a self- and peer-assessment tool to evaluate students' individual participation in group assignments. The experience was framed in the Education Degrees offered by the university, and was designed to contribute to developing the students' participation, autonomy and self-regulation, which are considered key in online learning settings (Bradley, Browne, and Kelley, 2017; Martin and Bolliger, 2018).

Assessment in online settings

Online learning environments present students with new challenges and require specific skills and attitudes, such as higher levels of responsibility for their learning (Hagel and Shaw, 2006) and substantial levels of motivation and autonomy. Students in online settings have to display "proactive attitudes, initiative in their learning and their performance during the course" (Borges, 2007, 5). From this arises the following question: how can learners be supported in developing this capacity?

The co-responsibility for one's learning is, according to Little (1995), the basis for learners' autonomy. One of the most important strategies to achieve in any learning environment is engaging students in metacognitive processes, which involves self-monitoring, self-assessment and self-grading (Dobrovolny, 2006). In this way, students can activate their knowledge to detect and act upon their strengths and weaknesses. Engaging students in self- and peer-assessment processes represents one of the strategies most linked to the achievement of metacognitive processes and self-regulation mechanisms (Panadero, 2017). In addition, the use of rubrics for peer-assessment can also enhance students' reflection and self-regulation as, in this way, they develop and foster critical thinking and evaluative judgements against set standards of assessment (Fernández March, 2010; Nicol and Macfarlane-Dick, 2006; Hawe, Dixon, Murray, and Chandler, 2020). To achieve this, the class design must include space and time for students to engage in meaningful learning activities without their teacher's supervision (Vonderwell, Liang and Alderman, 2007, 319).

The self- and peer-assessment rubric: an experience with students in Educational Studies

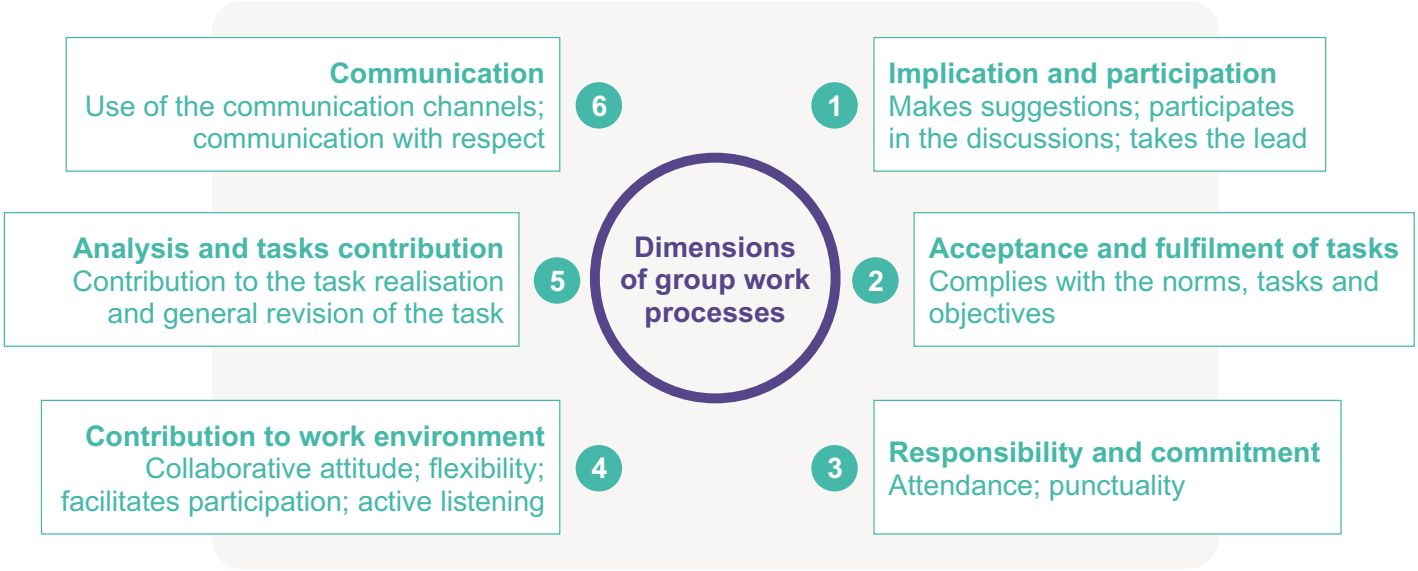
The rubric we present was designed to facilitate the self- and peer-assessment of Educational Studies students in group assignments. This experience was developed with different groups of first and second year students on various subjects with different instructional designs. Teachers used the rubric in a group assignment with two aims: (1) to allow university teachers to individualise the grades of students who developed group tasks and (2) to involve the students in the assessment process through self-assessment and peer-assessment processes.

The rubric was designed by the teachers and included dimensions and indicators derived from the systematic literature review regarding collaborative learning, rubrics and group-based assignments (Chica, 2011; Fabra, 1999; Falchikov, 2006; Freeman, 1995; Goldfinch, 1994; Jiménez, 2006; Morales Vallejo, 2008; Viles, Zárraga-Rodríguez, and Jaca, 2013). At the end of the review process,

we have selected those elements included in the effective group work process such as collaboration, engagement and group climate.

The designed process passed through different co-creation and validation stages and ultimately included six dimensions and 21 indicators (Figure 1). The indicators are expressed as statements that students need to grade according to their evaluation of each group member and their own self-assessment. Each indicator is graded in four levels (0 to 3), where 0 signifies the lowest level and 3 the highest level of achievement for each indicator. The rubric can be consulted in the following link: https://ddd.uab.cat/record/196345 (in Catalan).

Figure 1. Dimensions and indicators of individual participation in workgroups.



As mentioned earlier, the rubric was designed to be used for a double purpose: on the one hand, as an instrument of self-assessment (the student values their own contribution to the group assignment) and, on the other hand, as an instrument for peer-assessment (each one of the group members evaluates each of their group colleagues).

Derived from this purpose, the rubric can have multiple uses according to the teaching design. For instance, groups could decide to conduct the peer assessment individually and confidentially or agree to do it openly and share it with the rest of the group. In the table below, we summarise the different uses of the rubric.

Table 1. Uses of the rubric

	Who fills in the rubric?	When do students fill in the rubric?	How is the score established for each indicator?
Self-assessment	Each student about themselves	Individually, during virtual or face-to-face sessions	Each student decides the score according to their evaluation
Peer-assessment	Each member of the group individually fills in the rubric for each peer of the group	Individually, during virtual or face-to-face sessions	Each student decides the score according to their evaluation
	The group fills in the rubric collaboratively for each member	During virtual or face-to-face class sessions or outside the class session	Each indicator score is agreed collaboratively among peers after group decision-making

As summarised in the table above, the rubric can take a summative or formative shape according to the instructional design selected.

Additionally, the rubric can be used at the beginning of the course, during the course or at the end of the process, depending on the teaching aims being pursued.

+ *Initial assessment (diagnosis):* students can fulfil the rubric at the beginning of the group work process, allowing them to know what is expected of them during group work and helping them regulate their actions. This information could help the groups agree on the norms and rules of function.
+ *Continuous assessment (formative):* students can fulfil the rubric during the development of the group process. In this way, they can reflect on their actions and give their peers inputs that help them regulate their actions throughout the process. All the information could help the group review the norms and rules for the group's better performance.
+ *Final assessment (summative):* students fulfil the rubric at the end of the group work process. In this way, students have information about their performance during the development of the group work to help them determine the group's overall performance.

The rubric can be used differentially depending on how the students fulfil the rubric:

+ *Individually,* the student can individually use the rubric to assess their own contribution and the contribution of each of their peers involved in developing a group assignment. In this way, each student receives as many assessments as there are group members.

+ *As a group,* the group can jointly assess each of its members and the overall performance as a team. In this case, each student will receive a single assessment that will be agreed upon by the rest of the group members.

Whatever approach is used, it is important that the assessment process has a formative meaning and improves the performance of group work. Thus, it is important to reduce the pressure on the assessed subject. Likewise, the group evaluation process can favour dialogue and the strengthening of the group.

Regarding the place where the rubric can be used, students can fulfil the rubric during the class sessions (online or face-to-face) with the teacher's support or outside the session. Carrying it out in the classroom can give the assessment a more formative character. It allows commenting on each of the indicators with the large group and helps students internalise it. In addition, it can be done on paper or using online tools.

Once the rubric is employed, the results can be made public to the rest of the group members or to inform only the teacher or group member assessed. Using this, the results can be offered by one of the following options:

+ *Anonymously:* peer assessment is anonymous; students have access to the final scores from each peer, but they are not able to identify the assessor of each assessment. The main benefit of this option is that students have access to their peers' opinions regarding their performance in the group task, but the level of pressure is reduced, as the name of the students who provide the feedback is not public.
+ *Privately:* students do not have access to the scores received from their peers; they only know the average scores resulting from all the grades given by their group colleagues. This approach can reduce even more the peer pressure but could be less beneficial for the students assessed as they receive an overall opinion about their performance, which can make specific improvements difficult to implement.
+ *Publicly:* all students have access to each peer's assessment, knowing who made each assessment and how their peers scored them individually. In this option, the students can establish a dialogue with their peers, asking for direct and extensive feedback, clarifications and suggestions to improve their performance within the group.

Each approach has its pros and cons, impacting the group dynamics differently. Research suggests (see Panadero and Alqassab, 2019) that anonymity within the peer-feedback process may reduce insecurity when giving feedback by reducing peer pressure, as the student who provides feedback normally feels freer to express themselves and provide more valuable and critical insight to their peers. For instance, in a subject in which teamwork is a critical skill, conducting the assessment anonymously or publicly could allow groups to reflect, identify areas of improvement, agree on new norms and rethink the strategies used to work in the group. On the other hand, privately conducting the process may be a better choice in groups with previous conflicts or tensions or when teachers suspect that the assessment might be influenced by peer pressure if developed publicly or even anonymously.

University teachers can decide the specific weight of the self- and peer-assessment in the final grade, complementing their own assessment with peer-assessment or self-assessment.

Conclusions

The rubric we have presented is only one example of a tool that can foster students' inclusion in the assessment process, especially in environments in which student autonomy is required, such as online learning contexts. The rubric presents a series of benefits for student learning and participation. Through this tool, we have attempted to stimulate students' participation in their learning and foster students' autonomy and self-regulation. Students become more aware of their contribution to the group, reflecting on various dimensions, such as involvement, commitment, performance, environment, contribution and communication, both in terms of their learning and the contribution of their peers. Furthermore, the rubric helped to build a teamwork culture in class as the students were more aware of their strengths and weaknesses in the collaborative learning setting. This also had an impact on the class climate, promoting a more harmonious class environment among the students and between them and their teacher.

At the same time, being involved in self- and peer-assessment helped students to develop their evaluative judgement and self-regulatory skills. Students valued positively being an active part of the assessment process and knowing the assessment criteria at the beginning of the process. For this reason, it is important to engage students with the rubric beforehand and give them the opportunity to clarify the criteria and assessment standards. In doing so, the rubric contributes to democratise the assessment process, as this is not only in the teachers' hands, but also shared and agreed within the group.

In this process, students are invited to reflect on their practice, their behaviour towards their peers and their process: "Did I fulfil the task expectations? What have I learned? How have I contributed to my peers' learning? Were my contributions significant for my colleagues and me?" During this phase, teacher guidance is essential to provide support to the students when using the rubric, not only to promote their learning-process but also to develop students' skills in peer- and self- assessment. Moreover, the teacher's role is important throughout the process, especially once the students have applied the rubric and know the results. Some interpersonal conflicts may arise because of the application of the rubric and, in these instances, it may be necessary for the teacher to mediate.

Another benefit the rubric has is related to its potential to contribute to the sense of inclusion and fairness in assessment. This is particularly relevant when addressing teamwork evaluation since students have more information than teachers about their own and peers' contributions to draw conclusions and make value judgements. However, our experience demonstrated that students not only need assistance to implement the rubric but also a certain level of assessment literacy. Since most of them do not have previous experience with such assessment strategies, we have identified the need to engage students in some form of training before the peer assessment process starts, in which the teacher discusses and clarifies their roles as assessors in order to provide formative inputs to their peers.

The rubric has also benefited teachers, developing a more individualised and personalised assessment, and an improved understanding about the students' learning behaviour from many sources. From the teacher's perspective, the rubric also helped to identify those students who had more difficulties as well as those who were more advantaged in class. To know how well students are doing in class helps the teacher to adjust their teaching practice to meet students' needs. The assessment becomes more authentic, both by assigning different marks to members belonging to the same working group and conducting a formative assessment that substantially benefits students' learning.

Summing up, we have identified three practical implications of the use of the rubric for group projects activities: 1) engaging students in peer assessment could enhance the sense of fairness in group assignment; 2) lecturers should carefully design the learning and assessment scenario to maximise the spirit of fairness; 3) teachers should guide students during the peer assessment process.

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Equality, diversity and inclusion in the assessment of Law: reflections from a collaborative project

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Abstract

This article discusses equality, diversity and inclusion (EDI) in the context of a specific pedagogic project. Colleagues at 11 UK-based Law schools worked together in a collaborative venture led by Advance HE to consider and address a range of assessment and feedback issues. The project incorporated workshops and activities focused on EDI in relation to assessment and feedback in law. This paper's authors were each involved, directly or indirectly, in the collaborative project, and share here a series of reflections and recommendations about foregrounding and progressing EDI in assessment and curriculum design.

These recommendations emphasise issues including concerns over structural inequalities, inclusive assessment and feedback design, and bias and fairness in conjunction with student trust. We conclude that EDI should form a more consistent and underlying consideration in the design of assessment and feedback strategies in law programmes in the higher education sector. The insights will also have application to other disciplines and institutions considering inclusive assessment and feedback design.

Introduction and background

In this paper, we consider equality, diversity and inclusion (EDI) issues within the context of a specific pedagogic project. Each year, Advance HE coordinates a number of collaborative projects in which colleagues at higher education institutions work together with specialists at Advance HE to consider a specific theme. In the project we consider in this paper, 11 UK-based universities subscribed to a collaborative project focused on assessment and feedback in law. The project, which ran from September 2020 to June 2021, was undertaken against the backdrop of the Covid-19 pandemic and the impact of this on learning, teaching and assessment, as well as on the sector at large.

While not a central aim of the project at its design stage, a recurring issue that was raised was the importance of foregrounding EDI issues better in assessment and feedback. As part of this, colleagues at several institutions raised concerns about the existence of one or more 'awarding gaps' (differential academic outcomes in relation to student protected characteristics) that they had identified in their schools or faculties. Thus, EDI and awarding gaps in relation to assessment and feedback processes became key, emergent issues to be addressed.

In this paper, we reflect on what took place and what was learned as a result of our collaborative work on EDI in the assessment and feedback of students undertaking law degrees (where, in the UK context, such degrees are largely undergraduate level, though there is also postgraduate provision). We reflect on how EDI was addressed, ideas that were proposed, and lessons learned. We will argue that EDI should form a more consistent and underpinning consideration in the design of both assessment and feedback strategies. We also challenge common assumptions about the lack of flexibility available to course providers in innovating inclusive design in professionally accredited subjects. We hope that these reflections, and the resulting recommendations that we offer, will be valuable to staff and students working in law, but also in other disciplines.

Patrick Baughan and Jess Moody, two of the authors of this paper, contributed to the implementation of the project, while Hannah Borkin, also an author, recently published a literature review on bias in assessment (Borkin, 2020).

Contextualising the collaborative project

Advance HE has coordinated a series of multi-institution collaborative projects since the inception of the organisation. Previous projects have focused on a number of major themes and priorities in the sector, including employability, mental health and wellbeing, curriculum, and assessment and feedback. These projects are normally designed within a broadly disciplinary context, aimed towards professionals within subjects including engineering, business or medicine. Projects are advertised and institutions are invited to join, typically up to a maximum of 12 per cohort (open to UK and overseas institutions). Each project has a series of stages and takes place over a pre-set time period. Historically, most have included a mixture of face-to-face and online activities, often including a launch day and bespoke workshops at each of the institutions. However, as a result of the pandemic context in which this project was undertaken, all events took place online. It was the first time that an Advance HE collaborative project had been implemented in this way and so also represented a test case for future practice.

The project comprised 11 institutions: 10 universities and one private higher education provider, all in the UK. It was organised under the following stages, with earlier stages intended to inform later ones:

1. Introductory consultation – the project lead hosted an individual meeting with one or more representatives from each law school, enabling a discussion of assessment and feedback challenges and priorities in that school. In each case, as an output from the discussions, the project lead provided a list of resources that might be useful to the school as source material for the assessment issues they described.
2. Diagnostic survey – representatives from each school were invited to complete a survey, using an Advance HE diagnostic tool aligned to the *Transforming Assessment Framework*, to explore the areas where they encountered most challenge. Completion of the diagnostic yielded bespoke and cohort results that could be used to inform subsequent project stages.
3. Online collaborative event – this provided a vital opportunity for representatives of each of the 11 institutions to meet one another, share priorities and challenges and undertake activities together.
4. Bespoke labs (workshops) – this comprised the longest stage of the project, during which each institution was provided with two customised online workshops. These were for institutional representatives, but other staff and students within the school could also join. Significantly, each institution selected two workshops from a pre-set list of eight options, but each of these options was generated based on an analysis of information collected at the individual consultations (stage 1) and diagnostic surveys (stage 2). Workshops that were offered included, for example: *Key principles in assessment: design, integrity, criteria and methods; Developing student-focused, dialogic feedback;* and *Equality, diversity and inclusion in assessment and feedback: principles and practices.* Two of the eight workshops focused specifically on EDI issues, one on EDI in general terms; another on awarding gaps identified by staff in their law schools. While it was expected that a project of this type should address EDI issues, there were more requests for coverage and discussion than in previous projects. Further, some of these requests were made due to the pandemic context, suggesting additional challenges or concerns raised by the pandemic and the possible exacerbation of equity concerns (Brown and Sambell, 2020; NUS, 2020; Kernohan, 2020).
5. Online collaborative event – the second collaborative event included reflective activities and an additional, bespoke session on EDI in law.
6. Summary report and recommendations – at the end of the project, lead contacts at each law school were issued with a summary report, containing recommendations and resources in connection with the larger project.

Finally, something should be said about who represented each of the law schools at the various project stages. At the start, two or three representatives from each law school joined the project and attended the various events. Additional staff and students were encouraged to attend bespoke workshops. We encouraged institutions to bring student representatives from their law school to one

or more of the workshops, and where this occurred, student views and ideas were sought and were of value in terms of shaping the discussions. However, in part due to timings within the academic year and in line with current concerns about the challenges of engaging representative and diverse groups (Mercer-Mapstone, Islam and Reid, 2021), many workshops did not feature students. Typically, representatives comprised a mixture of programme directors, deans, lecturers and staff with special responsibilities, such as EDI or employability.

Inclusivity and assessment – reflections from the project

This section documents key issues that were raised and discussed in the bespoke workshops and, drawing on this, extrapolates from them reflections and ideas that should be useful to colleagues involved in assessment and feedback practice.

Widening the lens – looking beyond 'the gap'

Project participants asked to explore how more inclusive assessment and feedback practices could reduce inequalities in final degree outcomes. This strategic focus on awarding gaps at the endpoint of the student lifecycle was understandable in the UK context, where there is a sustained national inequality between different student demographics in final undergraduate degree classifications (Advance HE, 2020). For example, in Law as a first undergraduate degree, there is a 15 percentage point gap nationally between UK-domiciled white students and domiciled Black, Asian or minoritised ethnicity students in who achieves the top two degree classifications (a 2:1 or first) (Advance HE, 2020). While these gaps vary across institutions and individual subject areas, there is a renewed sector understanding and – in some nations – regulatory and funding pressure (UUK and NUS, 2018; OfS 2018) in relation to persistent inequalities.

Advance HE, like many organisations, supports an approach to tackling inequality which moves away from a potentially damaging deficit discourse, that is, one which situates the problem of the 'gap' with the students themselves (Solórzano and Yosso, 2002; UUK and NUS, 2019). Instead, we refocused inquiry on the structures and approaches of the institutions and learning environments provided for those students. As part of this structural and holistic approach, we challenged participants to problemetise an isolated, quantitative driven focus on assessment outcomes as a measure of inclusivity (or a site of change). While a quantitative approach to equality can help to measure reductions in the 'gap', such limited metrics may not provide insight into wider and related equity issues. These may include differential experiences of safety, belonging and engagement in the overall learning environment (Disabled Students' Commission, 2021; EHRC, 2019), but also such issues as a 'shared vision of fairness' (OIA, 2021, 3), student trust in their feedback processes (Carless, 2012), and ultimately ensuring assessment design enables inclusive learning and teaching as

> "the ways in which pedagogy, curricula and assessment are designed and delivered to engage students in learning that is meaningful, relevant and accessible to all" (Hockings, 2010, 1)

We also challenged colleagues to consider the multiple agents and drivers around work for inclusivity beyond institutional targets or regulatory demands to address awarding gaps. For example, we noted the motivation of staff to enhance their pedagogy and professional skills, and also the desire to build trust with students. We also noted issues of protecting the reputation of the wider discipline and profession, particularly in the context of challenging press globally in relation to online proctoring and legal qualifying assessments (Asher-Schapiro, 2020; Cutler, 2020; BBC News, 2020).

By encouraging this wider lens on the possibilities and challenges of inclusive assessment and feedback, we aimed to support a deeper and more sustainable understanding of structural inequalities and how they manifest (Advance HE, 2021), particularly within the long legacy of 'race' inequality (Arday, Belluigi and Thomas, 2021). By refocusing on the influence of assessment and feedback in the student journey we aimed to provide insights for other levels of learning beyond the undergraduate degree.

Getting back to basics: inclusion at the point of assessment design

At the start of each workshop, we introduced (or re-introduced) participants to the theory of constructive alignment (Biggs, 2003), in which it is argued that different elements of the teaching and learning process need to be planned in alignment with one another – the development of learning outcomes, the design of teaching, the setting of assessment criteria and tasks, and the provision of feedback to students. We drew on this theory to support our argument that EDI should be a central consideration at all stages of teaching and learning (Hockings, 2010) and to apply EDI principles validly to assessment necessitates its application from the start of planning any form of teaching (Hanesworth, Bracken and Elkington, 2019). Such discussions were pertinent in the context of rapid changes to assessment and feedback processes introduced during the 2020-21 pandemic.

A refresher on baseline principles of inclusive design also noted the wider quality assurance and legal requirements, which are particularly strong in the UK in relation to meeting the needs of disabled students. An inclusive design approach is one which does not only aim to 'meet needs on request' (individual adjustments); but also seeks to anticipate different needs: reducing administrative and emotional burden for learners (QAA, 2018).

The pandemic as reflection, not merely reaction

For understandable reasons of practicality and immediacy, we have found that discussions of inequality and the pandemic have often focused on the 'unprecedented' nature of the event. Discourses have focused on where inequalities are likely to occur, such as digital equity, fair mitigating circumstances, and the challenge of designing new assessment formats rapidly (Baughan, Carless and Moody, 2020). For this engagement, we wished to flip this thinking in our interactions, using the pandemic instead as a spotlight topic (or case study) as an opportunity to reflect on how inequalities could manifest in the absence of inclusive assessment and feedback design. This approach aimed to acknowledge the ongoing uncertainties resulting from the pandemic, the possibilities of changed mechanisms for decision-making in the post-pandemic institution, and the need to support reflective, inclusive assessors and tutors.

Putting bias in its place

Much of the discourse around equality in assessment and feedback has focused on reducing or mitigating unconscious bias. We acknowledged this interest, sharing current examples and findings from Advance HE's recent publication *Unconscious bias literature review: bias in assessment* (Borkin, 2020). The emerging themes explored in this review posit there is a risk that bias already exists, and therefore highlight current practices that help to reduce or eliminate bias. Anonymous marking is one such practice that has been put in place by many institutions in recent years, following substantial consultation and campaigning by the NUS and others.

While existing literature on the topic of anonymous marking suggests that it is a contentious practice with little statistical evidence to suggest that it narrows well-documented attainment gaps (see discussion in Borkin, 2020), institutions have continued to explore the possible benefits and nuances based on student feedback. In the academic years 2019-20 and 2020-21, a large proportion of institutions published a press release on their websites stating that they had adopted anonymous marking as standard in an effort to improve perceptions of fairness. More research, ideally with an intersectional lens, is likely to be required to understand the nuanced impact of anonymous marking. In the meantime, it appears that the adoption of the practice is enough to satisfy students' need for transparency, but it does not provide tangible evidence of eliminating bias altogether.

Further practices reviewed by Borkin (2020) include the removal of certain forms of multiple choice question assessment (negative marking) after evidence of apparent gender bias, and instead increasingly looking to alternatives to conventional marking practices, such as alternative comparative judgement. It is clear that institutions are mindful of the risk of bias and as such are open to adopting new practices, but these should be approached with care. Regular departmental reviews of assessment strategy and practices (in consultation with students) should be built in to check for the risk of bias; this will form part of a wider jigsaw in which inclusive design considers and responds to these risks.

Tools for change

Project participants – and many other Advance HE members – often request practical tools to support change: whether that is best practice indicators, case studies to emulate, evidence of what works, or roadmaps or action plans. In this project we tackled questions of not only how one could approach a topic such as inclusive assessment and feedback, but how would an institution know when they have achieved it.

Consultation and partnership

We problemetised this notion of 'how would you know' to challenge participants to reflect on their own positionality and knowledge, focusing on the range of indicators at their disposal, inviting them to not only consider quantitative data on assessment grading and degree outcomes, but to consider insights from a range of student partners and representatives, critical friends, and educator reflections. Additional evidence may arise from audit or review processes (eg the use of an inclusive curriculum

framework or equality impact analysis) or examination of trends in assessment and feedback related complaints, appeals and mitigating or extenuating circumstances processes.

Inclusive curriculum frameworks (ICFs)

ICFs have an established place in UK higher education and have seen an increase in popularity in recent years as a tool for supporting a consistent, holistic review of a curriculum (see McDuff et al, 2020; Ward and Gale, 2017; Duhs et al, 2019; May and Thomas, 2010). While most ICFs seek to address the wider point of what learning is being assessed and how to create an inclusive learning environment, many also contain sections or indicators directly relating to assessment and feedback (eg Advance HE, 2018).

From our work in the sector, we have identified common themes and components of ICFs, which usually include: indicators of best practice; a structured process of reflection (eg UCL, 2019); review or audit space for stakeholder reflection and input; and identification of priority areas for action. With this project, we argued that ICFs or similar frameworks of analysis could support a deeper, reflective and collaborative approach to understanding and implementing inclusion. We acknowledged that participants should explore what approach might work best for their local context. We have found that any framework that is felt to be overly prescriptive and/or generic faces particular challenges regarding what might be termed 'disciplinary exceptionalism'.

Challenging core constraints: disciplinary reflections

Our project with UK law schools incorporated a wide range of courses and subject areas related to law as both a professional practice, social science, and area of critical and academic study. However, it was acknowledged that a large proportion of our participants' cohorts would be linked to programmes providing accreditation with the UK legal professions through professional, statutory and regulatory bodies (PSRBs). These courses often provide challenge with a lack of flexibility or local discretion to innovate or adjust core programme content, or methods of assessment. In order to shift thinking from a position of 'disciplinary exceptionalism' or 'PSRB constraint' we provided examples of current interventions and strategies relevant to the core discipline. This included the *Towards anti-racist legal pedagogy* resource from the University of Kent (Jivraj, 2020) which gives specific examples of possible interventions relating to the law curriculum. These was situated within current discussions of the decolonisation of the UK legal curriculum (Adebisi, 2020). The University of Birmingham's Ward-Gale model of creating an LGBTQ+ inclusive curriculum also provided an alternative framing and focus for inclusive social sciences (Ward and Gale, 2017). We noted recent learnings on the need for curriculum innovations in legal studies to be supported with corresponding support in assessment literacy (Raj, 2020).

We recommend these resources for other PSRB accredited programmes to reflect on, just as for our project we also introduced participants to parallel discussions of innovation in inclusive assessment and feedback within, for example, the medical curriculum (Borkin, 2021).

Final comments and recommendations

In this paper, we have drawn on our experiences of delivering bespoke workshops to colleagues working in law schools, focused on EDI in relation to assessment and feedback. The reflections and recommendations we make are based on our own experiences of the workshops, ensuing discussions that have taken place with participants, as well as relevant published literature. One possible weakness of the paper is that it does not draw on a formal evaluation of the collaborative project because the evaluation is due to take place just after publication of this paper. This would provide richer data that might lead us to build on the ideas we have presented here. We will, of course, use relevant evaluative data to update our ideas and seek opportunities to share these in the future.

We have argued that institutions and departments should regularly and critically review and enhance assessment and feedback through a holistic understanding of inclusive design and delivery. We note how current priority discourses – around tackling awarding gaps; responding to the crisis of the pandemic; addressing bias, and curriculum enhancement – are all pertinent sites to critique and explore these understandings. We provided indications of the available tools and approaches to support such critical reflection, including those that are designed, or can be adapted, to support professional or disciplinary areas. For the latter, we note the benefits of a multiple institution disciplinary approach, which aimed to provide project participants with an approach to reflect more deeply on limitations and opportunities around perceptions of 'PSRB constraints', disciplinary norms, and current professional identities.

We conclude that there are key principles of inclusive assessment and feedback design which need to be regularly revisited and embedded into practice. We encourage colleagues to ensure any future mechanisms for inclusive review or enhancement provide sufficient opportunities for wider stakeholder reflection and engagement, to challenge existing norms, assumptions and biases, and build a greater shared trust in fair and equitable processes (OIA, 2021).

In summary, our recommendations are as follows:

+ Ensure that work around inclusive assessment is holistic and does not focus too narrowly on assessment outcomes for final undergraduate degrees in isolation from the wider learning and feedback journeys.
+ Consider how inclusive assessment and feedback design and constructive alignment can be better embedded into institutional procedures and professional and pedagogic development.
+ Reflect on lessons learned from the pandemic: how decisions were made, what norms were evident, and what inclusive practice can be carried forward.
+ Explore the learning around issues of bias, and the importance of perceived fairness, transparency and student trust.
+ Make use of existing tools and resources that are flexible enough to engage and support your disciplinary and institutional contexts, while providing sufficient critical challenge. Share case studies and learnings with PSRBs, learned societies and other communities of practice.

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Part C: Assessment and sustainability

Design principles for assessment of sustainability teaching

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Abstract

This article gives an overview of effective assessment practice for sustainability teaching in higher education. After briefly reviewing ways in which sustainability teaching is embedded in curricula, we consider attributes of sustainability assessment including the role of competences and the wider pedagogy of sustainability teaching. We then propose a framework of nine design principles for sustainability assessment. We argue that assessment of sustainability learning is most effective when aligned with curricula that are learner-centred, flexible, future-facing, active and experiential, collaborative, multidisciplinary, authentic and situated, affective and enquiry-based. These attributes promote the systemic thinking needed to explore global sustainability challenges, and they help develop self-regulated learning. A brief case study illustrates some of the principles and outcomes around equality, diversity and inclusion (EDI). We conclude that effective sustainability assessment requires whole-institution adoption of future-facing and flexible pedagogies.

Introduction to sustainability teaching and assessment

Quality, modern higher education (HE) must equip graduates with the critical thinking and problem-solving skills necessary for engaging with and addressing current and future socioeconomic and environmental issues. Accordingly, the UK government published its strategy for sustainable development in 2005 (HM Government, 2005) highlighting the crucial role of education in raising awareness of sustainability, and positioning sustainability principles at the core of the education system. Since then, detailed guidance on learning and teaching sustainability has been published (QAA and Advance HE, 2021; Sterling, 2012), sustainability is now included in many subject benchmarks, and sustainability teaching has become a priority for higher education institutions (HEIs) in the UK.

Despite the plethora of publications considering Education for Sustainable Development (ESD), there are limited examples of institution-wide reform and re-orientation of whole curricula towards sustainability (Leal et al, 2018). We are unlikely to reap the rewards of highly effective ESD if sustainability is merely seen as an add-on to teaching content. Rather, a transformative approach is needed, encompassing all aspects of curricula. In a quality education system where learning activities, content and assessment are constructively aligned, assessment design will be integral to the success of ESD.

In this paper, we consider the pedagogy of sustainability teaching and implications for assessment design. We propose a framework of assessment design principles that align with sustainability-focused, learner-centred, authentic and flexible learning, and which collectively promote core characteristics of sustainability-literate learners. A brief case study illustrates some key concepts. Subsequently, we argue that, in the wider context of future-facing, flexible assessment pedagogies, ESD can help HEIs to fully embrace learner diversity and inclusive curricula.

What is Education for Sustainable Development (ESD)?

> "ESD empowers learners to take informed decisions and responsible actions for environmental integrity, economic viability and a just society, for present and future generations, while respecting cultural diversity..... ESD is holistic and transformational education which addresses learning content and outcomes, pedagogy and the learning environment. It achieves its purpose by transforming society." (QAA and Advance HE, 2021, 8)

ESD addresses four top-level themes: global citizenship; environmental stewardship; social justice, ethics and wellbeing; and futures thinking. These provide a framework within which the big global issues enshrined in the UNESCO Sustainable Development Goals can be addressed.

Integration of ESD in curricula

ESD is integrated into curricula to varying degrees. At a basic level there may be minor modifications to curriculum content, or reference to sustainability in professional development planning (PDP). New modules might be introduced or encouragement given for sustainability-related dissertations and work placements. ESD may also be provided via cross-disciplinary and extra-curricular programmes. At an optimum level, sustainability is infused throughout the curriculum as well as in all institutional processes (Sterling, 2012). The degree and mechanism of integration may influence the design of assessment for sustainability learning, or indeed determine if sustainability is actually assessed at all. As with any discipline there ought to be clear alignment between teaching and assessment, but we now explore particular attributes of sustainability assessment as essential underpinning for development of a sustainability assessment strategy.

Attributes of sustainability assessment

Core competencies

Regardless of how ESD is integrated into curricula, most UK HEIs identify a set of graduate outcomes that integrate sustainability principles. The National Union of Students has also produced a set of sustainability attributes (NUS, 2019) to accompany its Responsible Futures institutional accreditation scheme (NUS, 2021). Some graduate outcomes are familiar and reflected in standard learning outcomes and assessment criteria (eg critical thinking and communication). Less familiar outcomes are specific to ESD: action for sustainability, systems thinking, interdisciplinarity, agency and

commitment to social justice, equity and diversity. Also implicit is self-regulated learning: the cognitive, metacognitive and resource management strategies students may adopt to control and regulate their own learning (Pintrich, 1999). Unesco (2017) identifies three groups of core ESD competencies at all levels of education:

(a) Ways of *thinking:* Systems, future and critical thinking

(b) Ways of *practicing:* Strategic, collaborative and with integrated problem-solving

(c) Ways of *being:* Self-aware and normative

Outcomes and competences such as these can be adapted to form the basis of module and programme learning aligned with assessment activities, and examples are provided by QAA and Advance HE (2021) across the full spectrum of knowledge, skills and attributes.

Pedagogy of sustainability learning and assessment

These competences imply a sustainability pedagogy distinct from traditional pedagogies (Table 1) and effective sustainability assessment strategies should aim to engage with a range of these characteristics.

Table 1: Pedagogical implications of ESD
(adapted from Sterling, 2004, 2012, 2018; Tilbury and Wortman, 2004)

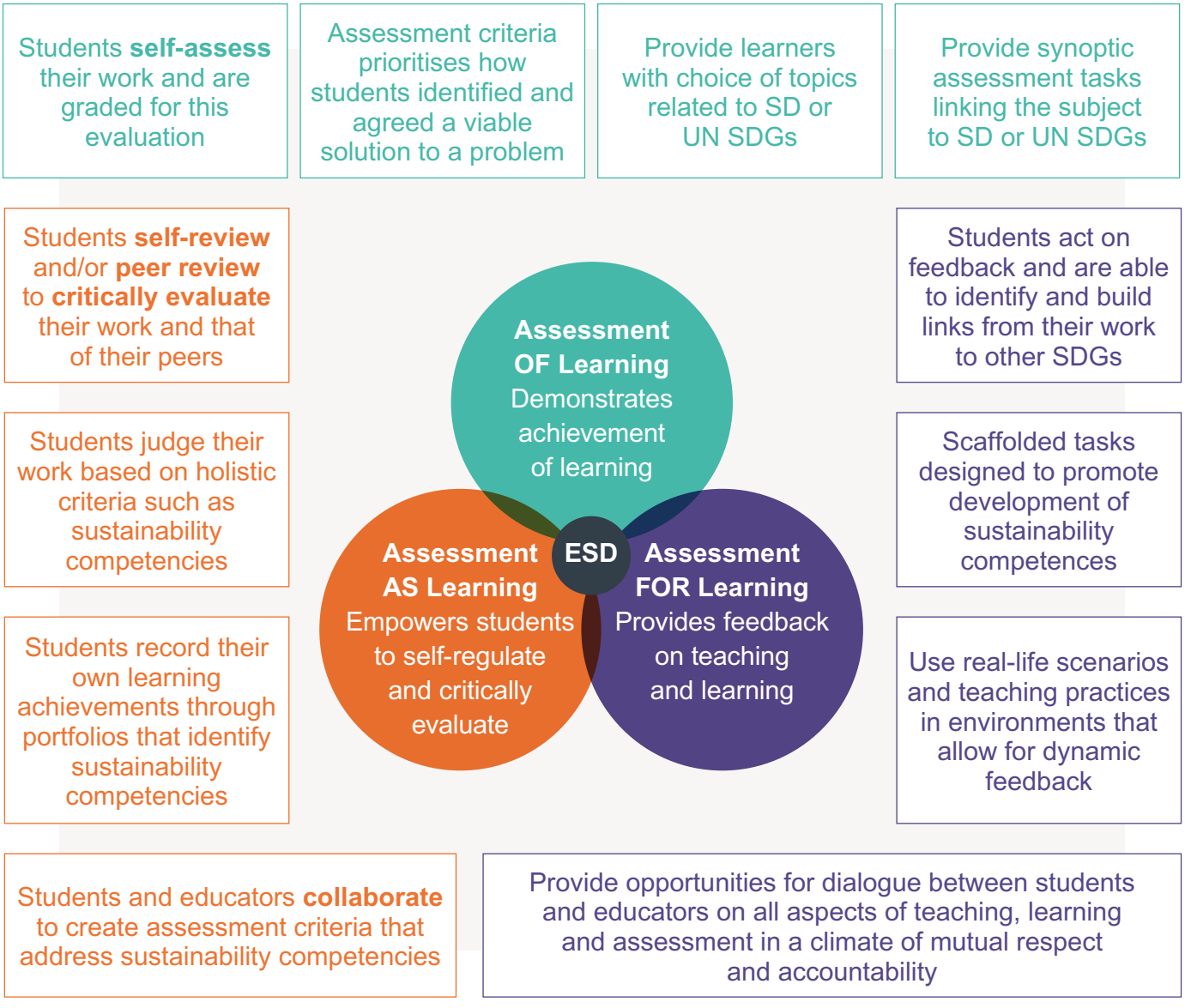
Traditional pedagogy	Sustainability pedagogy
Teacher-centred, top-down instruction	Learner-centred, experiential and situated learning
Transmissive, passive learning	Active learning through discovery
Limited learning modes	Diverse modes of teaching and assessment
Individual learning	Collaboration and peer learning
Discipline-based	Inter- and multi-disciplinary with systemic thinking
Theory and abstract knowledge	Orientated towards the theory-practice nexus
Accumulating fixed knowledge, curriculum content dominant	Provisional knowledge and self-regulated learning
Cognitive outcomes	Whole person outcomes

Characteristics of effective sustainability assessment

Given the wide variety of learning outcomes and competences for sustainability teaching, there are numerous potential methods of assessment. However, the assessment strategy should foster the holistic and transformational essence of ESD (QAA and Advance HE, 2021).

Rather than focusing merely on assessment *of* learning, one can use the concepts of a) assessment *for* learning and b) assessment *as* learning, as a useful overarching basis (Keamy et al, 2007; Dann, 2014). Examples of assessment strategies linked to these approaches are shown in Figure 1.

Figure 1: Assessment for, as, and of learning for sustainable development
(from QAA and Advance HE, 2021, adapted and available under CC license from the National Forum for the Enhancement of Teaching and Learning in Higher Education, 2017)



Design principles for sustainability assessment

Building on themes in Table 1, we propose nine core design principles for ESD assessment. Many of these assessment approaches are emerging and so there is a need to provide effective scaffolding for learner guidance and support. This is particularly true where these assessment elements sit in strong contrast to other, more traditional, approaches in the programme, or where there is considerable variation in assessment methods.

1. Learner-centred

Learner-centred assessment is necessary to achieve the self-regulated learning and increased agency that are integral to ESD. Through the choices learners are empowered to make they will have agency to influence, direct and regulate their own path through study (Keamy et al, 2007). Learner-centred approaches also promote EDI values, enabling a more personalised educational experience capable of meeting the needs of a diverse student body. In parallel with this philosophy, learners will also engage conceptually with the sustainability challenges of global diversity, reinforcing understanding that to achieve sustainable futures may require individuals and communities to modify their values, attitudes, policies and actions (Sterling, 2012). The learner-centred model of assessment challenges traditional learner-tutor power relations; students become partners in co-creating curricula rather than recipients, and the teachers' role is that of facilitator and mentor.

2. Flexible

Assessment is often a key motivator for student learning, but can sometimes jar with the complex practicalities of students' lived experiences. Rigid approaches to assessment also conflict with the increasing diversity of learners in terms of their educational, circumstantial, cultural and experiential backgrounds. Introducing flexibility into assessment can reduce these barriers and provide new opportunities for students to learn, and to demonstrate their achievement. For example, allowing choice around curriculum content (see case study) engages learners as they become empowered to select themes of relevance to them, matching their aspirations, intrinsic interests, experience and background. Flexibility is also possible around the format or method of assessment, the degree of self-direction accommodated, and the timing and weighting of assessment (Rideout, 2018).

3. Future-facing and global

Sustainability issues reside within dynamic and rapidly changing systems (Sterling, 2012). As such, learning outcomes and assessment need to be sufficiently flexible and open-ended both to allow for uncertainty and change, and to encourage critical and creative thinking and problem solving (QAA and Advance HE, 2021). Assessment methods that accommodate the provisional nature of knowledge in 'wicked' sustainability problems can be very effective in growing learner confidence and capability. Learners can be encouraged to stretch beyond mere problem-solving, to deconstructing assumptions, imagining alternative scenarios, and formulating novel solutions. For example, learners can be invited to respond to an initial scenario. In a second phase they respond to a new development

of that scenario, and then a third phase and so on. This reinforces the dynamic nature of sustainability issues and can be experienced in the form of an engaging game-play to discover what might happen next, or what does it look like from x,y,z perspective? Future-facing, scenario-based assessment needs space for ideas to emerge, but can be liberating and highly creative.

4 Active and experiential

Kolb's experiential learning cycle (1984) begins with a new experience or novel situation, followed by reflection and observation of links to prior experience or understanding, analysis to formulate concepts, and application to test hypotheses. Iteration provides multiple opportunities for formative assessment. Several assessment methods suit this active learning approach including:

(a) Applying theory to practice in case studies based on simulations or 'live' projects. The campus and local community can be used to great effect as a 'living laboratory' (eg its physical environment, resource usage and waste generation, food supply, community sustainability projects).

(b) Learning portfolios that capture reflection, progression, and a showcase of finished products (Nicholson, 2018).

(c) Group oral examinations (viva voces) via group discussion, interview or post-presentation Q and A. Grimes and Gibbons (2016) acknowledge the challenges of the viva, but argue validity and reliability can be achieved with clarity (what is being assessed during the viva), alignment of questions with learning outcomes, and use of safeguards (eg double marking, video recording). Group assessment tends to mitigate individual barriers, and marks can be awarded on an individual basis.

5. Collaborative

Team-based learning and assessment are central to ESD, and strategies can be put in place to overcome well-known challenges in assessing collaborative work (Webb, 1995). Openness about the challenges is key in effective management of team dynamics and in promoting peer and social learning; students learning from each others' knowledge, shared experiences, and dialogue around values, attitudes and beliefs, tackling bias and differences of perspective. These activities can transform students' diversity awareness and self-recognition of agency. Teamwork training is a valid sustainability objective and can be incorporated into learning activities. Large variations in effort and achievement can be tempered using peer review (Nicholson, 2018), or through individual assessment of collaborative activities.

6. Multi-disciplinary

To understand and solve wicked global sustainability problems requires both systems thinking and multidisciplinary input (Sterling, 2012). Assessment that promotes systems thinking and synthesis across disciplines has the power to transform learner perceptions of the boundaries of their knowledge, to discover interests and opportunities beyond their discipline, and to grow their

confidence around future potential and agency. Students able to grasp the need for cooperation and collaboration will also be better able to identify connections between sustainable development and their academic discipline (QAA and Advance HE, 2021).

7. Authentic and situated

Learning derived from assessment of theory only may be abstract, lacking context, while learning situated in the real world and engaging with a community of practice can be more effective (Lave and Wenger, 1990), even when incidental or less formal (eg linked to extra-curricular activities). Deeper learning is possible where assessment requires complex links to be made between theory and practice. Engaging with real-world problems provides authenticity, a sense of urgency and purpose, and assessment can be linked to real places and people, potentially engaging external stakeholders in the assessment process and adding a layer of accountability. A common assessment approach requires learners to collect and/or analyse data, leading to recommendations that have a real influence in the world. An example is given by Cross and Congreve (2020) of students who compared crop yields with other environmental and demographic data, leading to suggested improvements to farming practices in a developing country. In addition to the obvious agency of these students, they also learned about the value of citizen science and its role in managing climate change. Other authentic assessments are possible, including providing interpreted information for the public, preparing policy briefing notes and working alongside employers to solve specific problems. The authors have employed work placement students from various disciplines to create sustainable development resource packs as part of their assessment. Hypothetical scenarios replicating real situations can be used in semi-authentic assessment but without the associated practical constraints.

8. Affective

Real sustainability problems are intrinsically multi-dimensional, involving the whole person and their affective, cognitive and physical domains (Sterling, 2012). ESD assessment can extend beyond comprehension to encourage reflection, and engagement with values, attitudes and behaviours (QAA and Advance HE, 2021). For learners, this can help develop self-regulation and sense of agency, and as such, can be transformative (Rieckmann, 2018). Challenging ethical issues underlie many sustainability problems and they can invoke strong emotions. Handled sensitively, this can provide opportunities for affective learning. Assessment examples include reflective logs, video diaries and blogs. Role play, debates, and mock public enquiries can work well too as they encourage deep exploration of issues from widely different perspectives – some examples are given by Sterling (2012).

9. Enquiry-based

Enquiry-based learning (EBL) is a constructivist approach, building from an open-ended research question to a rich exploration of issues. During enquiry, significant acquisition and development of associated skills may occur (eg information literacy, research design, data analysis, communication). EBL is inherently learner-centred, multidisciplinary, experiential and collaborative, and an ideal

pedagogy for sustainability teaching and assessment (Wiek et al, 2014). While EBL can address the complex systems integral to sustainability issues, assessment tasks can be simple, open and flexible. This encourages learners to identify boundaries, recognise and evaluate constraints, examine issues from different perspectives and undertake scenario thinking. Outputs can include storyboards, creative team presentations, research enquiry reports and development proposals. Problem-based learning (PBL) focuses on narrow or closed questions for which there is a known or determinable solution, and lends itself to more conventional assessment outputs such as using sustainability principles as the basis for developing, redesigning or rethinking a process, producing policy framework, designing an object or conducting data analysis. EBL is used as the primary learning and assessment method in the short case study presented below.

Case study: Professional Geographer

Curriculum: around 100 first-year undergraduate Geography, Physical Geography, and Human Geography students take this 15-credit core module at the start of their three-year degree. Module aims are to develop academic and professional skills and this is reflected in the learning objectives around collaborative enquiry, critical thinking, data handling, communication and professional development planning. The Sustainable Development Goals provide a framework within which mixed discipline teams collaborate in a learner-centred EBL project to research a global geographic challenge of their choice. Early sessions use object-based triggers to introduce systemic thinking in sustainable development issues and to stimulate team project discussions. Teams are encouraged to explore case studies and consider varying scenarios in their thinking.

Module assessment: there are two assessment elements: (1) An end-of-module team presentation with integrated Q and A. Presentations include critical review of literature, analysis of secondary data supporting a central thesis, discussion of counter theses, and recommendations and/or conclusions. Subsequently, students peer assess team member contributions. (2) An individual digital portfolio containing a written critical review of an element of the team project and a PDP including self-audit (academic skills, teamworking and leadership), reflection and evaluation. Considerable flexibility in portfolio design encourages creativity and is incentivised in the grading scheme.

Implementation: facilitated team discussions, which gradually open up the affective domain, are supported with mini skills-focused workshops and tutorials. There are multiple opportunities for formative feedback throughout, but the emphasis is on assessment *for* learning, with elements of self- and peer- assessment enabling assessment *as* learning.

Outcomes: evidence from module and assessment evaluation indicates positive outcomes for learners:

+ tangible growth in sustainability literacy
+ development of multiple academic and professional skills
+ empowerment through team project design

+ significant progression in self-regulation, confidence, perceived potential as agents of change, and identity as global citizens
+ improved grasp of discipline boundaries, opportunities and benefits of interdisciplinarity
+ peer learning and raised diversity awareness
+ re-evaluation of prior sustainability knowledge, attitudes and values in the light of academic enquiry and critical analysis of contrasting viewpoints.

Challenges: in this multidisciplinary, team-based learning there were initial challenges following team formation and during project scoping. However, careful scaffolding around activities and provision of specific teamwork training, equipped students with the knowledge and skills needed for effective peer learning. Tackling sometimes difficult group dynamics and addressing the complex cultural issues surfaced by projects, had the positive impact of raising diversity awareness, fostering reflection on differing perspectives, and valuing difference.

Conclusions

Effective assessment of sustainability depends on alignment with learning outcomes that reflect principles of learner-centred, flexible, future-facing, experiential, collaborative, multi-disciplinary, authentic and affective learning. Formulating and verifying these learning outcomes is challenging and needs careful consideration, but their success, as observed through student assessment, can be measured against institutional policy and resources (Lockhart, 2018).

The assessment environment characterised in this paper aligns remarkably well with the synopsis of flexible pedagogy by Ryan and Tilbury (2013). They identify core future HE teaching challenges around learner empowerment, future-facing education, curriculum decolonisation, transformative capabilities, boundary-crossing, and social learning. These characteristics are integral to sustainability education, underlining the crucial role of this paradigm in HE.

Many of the design principles discussed herein represent key traits of inclusive curricula; learning and assessment environments, resources and methods that minimise barriers to engagement. For example, learner-centred and flexible assessment can provide universal access to learners; authentic, experiential, affective and collaborative assessment can reflect and value the diversity of learners; and future-facing, global and multidisciplinary assessment can equip students with agency in the real world.

In HE, there are limited examples of whole curricula being reformed and re-orientated towards sustainability (Leal et al, 2018). Modular delivery of sustainability education in discrete packages is much more common. Within such structures, local interventions accompanied by novel assessment strategies can create imbalance, incoherence and lack of progression between modules and different parts of a programme (Cross and Congreve, 2020). Learning from assessment then takes place in discrete chunks with a focus on problems, rather than a progressive scaffolding across the breadth

of sustainability competences and attributes that can lead to discovery of solutions. One practical approach to embedding ESD across curricula and assessment strategies begins with the identification and exploration of societal, environmental and economic themes and their interconnections, in parallel with a re-evaluation of the pedagogy for delivery. Alternatively, assessment and associated skills and knowledge can be mapped onto the United Nations Sustainable Development Goals (SDGs). This approach brings a tangibility to the otherwise challenging aspects of ESD (Leal Filho et al, 2019). Effective ESD integration in HE needs a whole-institution approach to curriculum design (Leal et al, 2018), that reimagines and transforms curricula, campus operations, organisation of services, student partnership, community interactions, and research (Buckler and Creech, 2014). Only then will HEIs become experiential places of learning and assessment for sustainability (Rieckmann, 2018).

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Assessing competencies for future-fit graduates and responsible leaders

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Abstract

As educators we have a responsibility to support our students to become future-fit and responsible leaders, informed and empowered to contribute to tackling the world's challenges. Assessment forms a critical part of curriculum design to develop and assess learning outcomes. The language of competencies is increasingly seen as a way of framing the key attributes that universities aspire for their graduates to have, and competency frameworks can provide a useful tool in the (re)design of assessments to ensure they contribute to developing, as well as assessing, competencies. This paper explores how assessment design can be applied to the development and assessment of sustainability competencies for future-fit and responsible leaders, in the context of online learning and issues of inclusion. These issues are explored through three diverse case studies covering i) large-cohort online assessment, ii) reflective writing to replace a residential field course, and iii) a group-based consultancy project.

Introduction

Universities are the incubators for society's future leaders. Hence, how we design our assessments is critical to our influence on leadership development. Our graduates' future leadership can take many forms, from high-profile recognised leadership roles in politics and business, to leadership of teams within the workplace, and project leadership in professional and community contexts – all of our students will be leaders in some way and need to develop the competencies to match. Therefore, as educators we have a responsibility to design assessment to help develop our graduates to be 'future fit' and responsible leaders.

Assessment is a key component of student success in higher education (Advance HE, 2019a) and should be viewed as a tool for learning development. This is assessment *for* learning, rather than simply a tool for measuring the level of achievement of learning outcomes – assessment *of* learning (Advance HE, 2019b). Assessment for learning requires innovative forms of assessment that go beyond traditional approaches. However, it is also essential to develop assessments that are inclusive. This is understood here as being accessible to all students, free from disadvantage to students with particular characteristics, while ideally allowing students to draw on and construct their learning from their own diverse backgrounds and experiences.

The Covid-19 pandemic has demonstrated the need, but also the potential, to create assessments that are flexible and adaptable, able to achieve similar learning outcomes in an online environment (Rapanta et al, 2020). The use of, and even rapid transfer to, an online learning environment does not preclude the use of innovative and authentic assessments to achieve learning outcomes, and assessment in an online context can take various forms (Arsenis, Flores and Petropoulou, 2021).

There is a growing body of educational literature highlighting the need to ensure our educational programmes, irrespective of discipline, support the development of student 'competencies' to enable them to tackle the personal and professional challenges of contributing positively to society and being responsible leaders. The term 'sustainability competencies' is increasingly being used to capture the range of knowledge, skills and values/attitudes/attributes seen as critical to being able to tackle our society's sustainability challenges (QAA and Advance HE, 2021). Dharmasasmita et al (2020) provide a useful summary of three leadership-focused competency frameworks (responsible, transformative and ethical leadership) and how these compare with sustainability-focused competencies of which there are also myriad frameworks (Brundiers et al, 2021; Lozano et al, 2017), highlighting significant overlap between different frameworks.

Due to the pandemic and the need to 'rebuild' many parts of our economic system, along with the opportunity the pandemic has provided to reflect on our social systems, stakeholders from various backgrounds have suggested the need to 'build back better', incorporating the transition to a low-carbon economy and addressing social inequalities. Our education systems play a key role in contributing to the development of a more sustainable society, captured by the field of Education for Sustainable Development (ESD).

In this paper we focus on the UNESCO (2017) Sustainability Competency Framework to explore the role of assessment in developing competencies for future-fit leaders, while considering implications for inclusion and innovative assessment in an online context. Table 1 summarises the eight sustainability competencies of this framework.

Table 1: UNESCO (2017) Key competencies for sustainability (from QAA and Advance HE, 2021)

Competency	A student who displays this competency can:	
Systems thinking competency	+ recognise and understand relationships + analyse complex systems + consider how systems are embedded within different domains and scales + deal with uncertainty	Ways of thinking
Anticipatory competency (future thinking)	+ understand and evaluate multiple outcomes + create their own visions for the future + apply the precautionary principle + assess the consequence of actions + deal with risks and changes	
Critical thinking competency	+ question norms, practices and opinions + reflect on one's own values, perceptions and actions + take a position in the sustainable development discourse	
Strategic competency	+ develop and implement innovative actions that further develop sustainable development at the local level and further afield	Ways of practicing
Collaboration competency	+ learn from others (including peers, and others inside and outside of their institution) + understand and respect the needs, perspectives and actions of others + deal with conflict in a group + facilitate collaborative and participative problem solving	
Integrated problem-solving competency	+ apply different problem-solving frameworks to complex sustainable development problems + develop viable, inclusive and equitable solutions + utilise appropriate competencies to solve problems	
Self-awareness competency	+ reflect of their own values, perceptions and actions + reflect on their own role in the local community and global society + deal with feelings and desires	Ways of being
Normative competency	+ understand and reflect on the norms and values that underlie one's actions + negotiate sustainable development values, principles, goals and targets, in a context of conflicts of interest and trade-offs, uncertain knowledge and contradictions	

These competencies can be further subdivided into knowledge, skills and attitude/value learning outcomes – also referred to as sub-competencies or domains of activity (Muff, 2016), which can then be used within assessment design. The QAA and Advance HE (2021) ESD Guidance provides a breakdown of learning outcomes for each of the eight competencies. This paper does not have scope to explore in detail each of the eight UNESCO (2017) competencies. Instead, we outline in Table 2 knowledge, skills and attitude/value learning outcomes for the 'systems thinking competency', drawing on the QAA and Advance HE (2021) Guidance and Muff (2016).

Table 2: Examples of learning outcomes (or sub-competencies/domains of activity) for the 'systems thinking competency' based on QAA and Advance HE (2021) and Muff (2016)

	Knowledge	Skills	Attributes/Attitudes/ values
QAA/ Advance HE (2021)	+ Describe the relationships between environmental, social and economic systems, at scales from local to global level + Identify the tensions between the 17 SDGs and recognise their interconnections + Recognise that a collective effort is not necessarily just a simple sum of each individual's effort, but is likely to be more complex and have multiple drivers that may be personal, political or communal + Identify that positive or negative environmental change may arise from economic growth + Describe how power structures and political systems influence SD	+ Recognise and understand relationships + Analyse complex systems + Consider how a system's constituent parts interact and operate at different scales and across time + Work with interconnectedness and complexity in a systemic context, synthesising diverse information and data to offer a range of potential solutions + Identify the interactions between social, economic and environmental systems + Assess a problem from different scales and perspectives	+ Think systemically, in terms of recognising connections and interactions between factors, and understand that actions often have multiple consequences + Deal with and manage uncertainty + Appreciate the root causes of unsustainable development including environmental, social and economic actions, and their links to cultural considerations + Identify the factors that have the biggest potential for driving constructive change
Muff (2016)	+ Understanding how the system works + Understanding interdependencies and interconnection of systems + Understanding sustainability challenges and opportunities	+ Dealing with complexity and ambiguity + Estimating consequences of decisions on the system + Seeing the big picture and the connections rather than the parts	+ Working across disciplines and boundaries + Defending a long-term perspective + Providing a trans-generational perspective

To have real value, these competencies need to be operationalised effectively in teaching and learning activities, including assessment. A wide range of assessment tools and approaches, including questionnaires, reflexive diaries, interviews, narrative tasks, scenario/vignette question design, conceptual maps and pre-post-tests, have been used in the assessment of sustainability competencies, yet this is still an undeveloped field (Cebrián et al, 2019), and has been little explored in the contexts of inclusion and online delivery.

This paper explores the intersection of assessment design for the development of sustainability competencies and responsible future leaders, within the integration of inclusive assessment design and online delivery. The paper draws on case studies from two universities. These assessments are diverse in context: from a reflective blog on a student-led experiential weekend, to external facing consultancy-style modules to a large cohort, whole university sustainability certification scheme. Following description and analysis of the three case studies, we draw out the key learning for practitioners and outline recommendations.

Case studies of developing and assessing sustainability competencies

Example 1: reflective writing replacing an experiential field course

This case study demonstrates how learning outcomes from a residential field course experience were achieved within online delivery required by the pandemic.

Pre-Covid-19, Keele University students visited the Centre for Alternative Technology (Wales), for a residential weekend, staying in the Centre's eco-cabins. This visit aims to help students develop a number of sustainability competencies (Table 1), with a particular focus on reflecting on their own values, perceptions and actions, and identifying practical interventions for sustainability challenges. Many students report making pro-sustainability changes to their everyday behaviour following the visit.

Residential field courses have many benefits, including social learning opportunities, development of cohort identity, and placing theory in a real-world context (Rahman and Spafford, 2009). However, for some students they can also present challenges, such as difficulties for those with caring and work responsibilities, anxieties of living with people they do not know well, being away from support networks and accessibility issues (Atchison et al, 2019).

The Covid-19 pandemic prevented the 2020-21 cohort from taking part in the residential weekend. In its place, a weekend date was identified during which students (and staff) were tasked with trying to live sustainably and actively think about the sustainability implications of their decisions and actions. This was assessed as a 500-word reflective blog post (one of five for the module). The activity and assessment were successful in developing and assessing several different learning outcomes relating to different sustainability competencies (Table 3), therefore achieving many of the learning outcomes associated with the original residential trip.

Table 3: Summary of sustainability competency learning outcomes (from QAA and Advance HE, 2021, Table 2, p24) developed through the 'sustainable living weekend' activity and the sustainability competencies directly assessed (in bold) (K= knowledge, S = skills, A/V = attributes/values).

Sustainability competency	Learning outcome/sub-competency
Systems thinking	+ Understand that actions often have multiple consequences (A/V) + Identify the factors that have the biggest potential for driving constructive change (A/V)
Anticipatory thinking	+ Identify the need for decisions about natural resources to involve judgements, not just about economic viability but about risks to future ecological, social or cultural wellbeing (K) + Assess the consequences of actions (S) + Be flexible, resourceful and adaptable to fit changing and/or unforeseen circumstances if it is likely to have a positive outcome for sustainable development (A/V)
Critical thinking	+ Identify the rationale for encouraging behavioural change, where existing practices are shown to have a negative impact on the human and natural environment (K) + Demonstrate the capacity for independent, evidence-based integrated thinking as the foundation for developing their personal ethical code (A/V) + **Evaluate the consequences of their own actions** and of collective actions (A/V) + **Reflect on their own values, perceptions and actions**, comparing and contrasting them to others who may have influence (A/V)
Strategic thinking competency	+ Understand how emotional and cognitive awareness can influence decision making (K) + **Identify then enact changes to actions or behaviours where existing practices have a negative impact** (K) + Develop and implement innovative actions that further SD at the local level and beyond (S) + **Practise decision-making and analyse consequences of decisions made** (A/V) + **Undertake reflection on actions and behaviours** (A/V) + Integrate thinking as a foundation for developing their personal ethical code (A/V)
Collaborative competency	*No learning outcomes developed in this area*

Sustainability competency	Learning outcome/sub-competency
Problem solving competency	+ **Effectively engage with real-life problems relevant to sustainable development (S)**
Self-awareness competency	+ **Actively implement or contribute to changes that promote sustainable development** within the scope of their own learning experience and study environment (S) + Clarify their own views on ways that SD can be achieved in different local and global communities and circumstances (A/V) + **Reflect on their own values, perceptions and actions** (A/V) + **Reflect on their own role in the local community and global society** (A/V) + **Continually evaluate and further motivate their actions** (A/V)
Normative competency	+ Identify the interactions between human communities and ecological systems, and be able to assess the potential impacts upon each other (K) + **Identify practical interventions for sustainability challenges** (K) + Negotiate SD values, principles, goals and targets, in a context of conflicts of interests and trade-offs, uncertain knowledge and contradictions (A/V) + **Understand and reflect on the norms and values that underlie one's actions** (A/V)

Critical consideration of the assessment against the sustainability framework highlights areas for further development:

1. The potential to develop collaborative competencies through sharing and discussing reflective blogs within the group or through peer evaluation. This would fit with the authenticity of writing a public 'blog' but could reduce students' willingness to write openly about their reflections and experience.
2. The potential to develop more critical thinking competencies through explicitly addressing these in the reflective questions. For example, in order to develop (and assess) the 'systems thinking' competency, students could be asked to consider the impact of their scale of action and the multiple influences (eg political systems and power) on their actions.

This alternative activity can help address some of the inclusion challenges posed by residential trips and could further enhance inclusion and diversity considerations through encouraging students to reflect on and make links between their actions and decisions, sustainability considerations, and their own cultures, backgrounds and experiences. However, though several learning outcomes can still be achieved through this activity, many of the benefits of a residential field course, including the development of cohort identity and belonging, can be lost.

Example 2: assessing and developing collaborative competencies in a real-world context

Both Keele University and Nottingham Trent University run final year undergraduate modules where students work in groups as consultants to improve the sustainability practice of external partner organisations. This consultancy can be and was delivered online during the pandemic. Developing effective group and leadership skills, as well as project management skills, are key learning outcomes of these modules, as are the development of specific sustainability skills and knowledge. Although research shows that students' experiences of group work is generally positive, there are significant challenges (McGraw and Tidwell, 2001; Hassanien, 2006) and group work is associated with particular challenges for more marginalised groups (Noonan, 2013). One way of overcoming these challenges, used in one module, is derived from the SCALE-UP methodology developed particularly for increasing achievements of marginalised groups (Beichner et al, 2007). Members of the group take different roles in every session and the role of the leader is passed on to every team member. This is often the first chance for some students to explore themselves in a leadership role and reflect on the leadership style they have adopted.

The key aspects of the design of this authentic assessment are outlined below:

Group presentation: in both modules, students present their group projects to peers and external partners, using a poster format in one module, and a live PowerPoint presentation (delivered online on one occasion). Both these formats incorporate Q&A with the partner organisations. A further adaptation to online delivery would be to invite the clients to give the briefs at a live online event, as well as peer-to-peer feedback during live presentations eg using emojis.

Group report: in both modules, students present their final results in a professional report, made available to the partner organisations. At NTU, the reports are specifically aimed at helping local organisations achieve the Investor in the Environment accreditation, as well as demonstrating ways to reduce greenhouse gas emissions within all functions of the organisation while showing an understanding of how companies operate (see details in Molthan-Hill et al, 2020; Molthan-Hill et al, 2017).

Reflective blog: both modules require students to reflect on the group working process using the Belbin (2004) roles framework and their learning about their own group working preferences and experiences. The Belbin (2004) framework helps support effective group work processes and addresses some of the challenges and frustrations that students can experience with group work.

Peer feedback: this was provided through the presentation sessions. The Keele presentation session was only formatively assessed at a 'work in progress' stage involving peer (and partner) feedback to further develop the final project report. In this module, peer feedback was also provided on project proposals. Each group discussed the proposal of another group and collaboratively provided feedback using a marking proforma.

Assessment of peers' contribution to group process (included in group mark): a small part of the individual mark generated for the group projects in the Keele module was created by students evaluating the performance of others in their group.

These assessment methods enabled the development of a range of sustainability competencies:

Collaborative and self-awareness competency: development of this competency was enabled through the group work process including group assessments and supported by the use of the Belbin group role framework. Assessment of this competency was enabled through peer evaluation and the reflective blog.

Systems thinking, anticipatory, integrated problem-solving and normative competencies were developed through assessing the different functions and contributions to greenhouse gas emissions within a complex organisational setting, and through using sustainability assessment frameworks (Gibson, 2006) to evaluate recommendations.

Strategic competency is at the core of these modules through the aim of developing and implementing innovative actions that further sustainable development with project partners.

Future developments of these assessments will include integration of 'Carbon Literacy Training' (Srkoc et al, 2021) adding further competencies such as Anticipatory/Future Thinking and additional topics such as climate justice.

Although these modules are specifically focused on 'sustainability' consultancy, all the above elements could be incorporated into similar consultancy-style modules focusing on any topic and develop sustainability competencies.

Example 3: assessing and delivering online to large cohorts

Our third example demonstrates how various assessment methods can be integrated in engaging online provision, at large-scale, for students from diverse backgrounds.

The Sustainability in Practice (SiP) certification, offered to all Nottingham Trent University students and staff online since 2013-14, was designed as a transdisciplinary enquiry with a 'MOOC' feel so that learners study at their own pace. It is integrated into the curriculum for various disciplines, but also offered as co-curricular activity for undergraduates (it is a Higher Education Achievement Record (HEAR) recordable activity). Through SiP all students gain at least a baseline level of sustainability literacy with a special focus on solving sustainable challenges (see details in Dharmasasmita, Puntha and Molthan-Hill, 2017; Molthan-Hill, Dharmasasmita and Winfield, 2016). Feedback and assessment were informed by research into effective practices (Gibbs and Dunbar-Goddet, 2007), and include strategic use of formative assessment techniques such as automated knowledge checks and peer feedback opportunities.

Peer review and self-assessment: in the design of SiP we made sure that students can only progress to the next session when they have posted an answer to a set task and commented on a

post of a fellow student. Knowing that everyone might read their post encourages them to write a thoughtful answer. The peer-to-peer feedback can result in lively exchanges. One tutor monitors the task/chat rooms for quality and to give further prompts as needed.

Online test to assess basic understanding: once the SiP became integrated into some of the core curricula (eg for approximately 1500 students in the business school), we had the challenge of how to upscale the assessment. We designed discipline-specific tests to be taken online which do not require any lecturer to be involved in the assessment. The students must achieve 60% and confirmation of their result is added to a portfolio along with other documents required for the module assessment. They can then opt in to submit their work in a flexible assessment format (see below), which is recorded on their HEAR.

Flexible assessment: learners create a showcase piece designed to practice certain skills for their course relevant to their own context and contributing to solving sustainable challenges. In the past two years, innovative submissions have included posters, mood boards, videos, business proposals, poetry, podcasts and even a fashion shoot. The flexible assessment approach enhances inclusion, allowing students from diverse backgrounds to express themselves in a way of their choosing and develop authentic solutions. For example, one student who grew up in a developing country gave a moving account of how she felt as a child having to search for clothes in bins and used this to develop a solution for this problem in her submission.

With regards to key competencies for future-oriented leaders, the SiP assesses the following:

System thinking competency and problem-solving competency: students grapple with challenging, contemporary issues as framed by the UN Sustainable Development Goals such as poverty, climate change, economic and public health issues, with the certainty that solutions do not exist in discrete disciplinary packages. Four online sessions take participants on an exploration of personal, disciplinary and multi-disciplinary perspectives before a final focus within the assessment on creating solutions as a response to the transdisciplinary question ‘How can we feed/clothe/power the world sustainably?’

Strategic competency and collaborative competency: SiP champions a transformative ‘change agent’ quality, providing new knowledge, facilitating different ways of being and empowering learners to drive change.

Critical thinking competency and self-awareness competency: in 2018-19, a flexible assessment format was introduced to facilitate personalisation of assessment, enabling learners to think critically about their own links to the issues covered by the SiP. While the previous assessment was based on videos, posters or mood boards, students can now express themselves more widely.

The SiP has been delivered predominantly online from the start yet provides an interactive, personalised experience. Prior to the pandemic, SiP offered many students their first experience of a fully online course and it continues to offer an exemplar of online learning employing diverse and inclusive assessment.

Discussion

The case studies demonstrate that assessment that is challenging, realistic and meaningful, as well as authentic and work relevant (Advance HE, 2019b), can

1. be delivered and adapted to an online context, while
2. addressing issues of social inclusion and diversity, and
3. develop and assess the learning outcomes required for future leaders with competencies to tackle society's sustainability challenges.

Learning from the three case studies is explored below across these three areas.

Adaptive and flexible learning for online assessment

The Covid-19 pandemic required a seismic and near-instant shift across the higher education sector to transform learning and assessment for online delivery. Concerns have been raised in the media, as well as the academic literature, about the potential of reduced quality in educational provision and the need to indicate clear ways of assessing students' participation (Rapanta et al, 2020). These case studies demonstrate that i) innovative online delivery and assessment is not a new concept (case study 3) and ii) that a rapid transfer to online delivery can still lead to assessment that is authentic and work-relevant, developing autonomous learners through peer-assessment and reflection (Advance HE, 2019b; case study 2).

The pandemic will likely lead to a longer-term shift in thinking about learning and assessment design with indirect benefits and consequences. The integration of more blended learning delivery has implications for reductions in carbon emissions from commuting, although online learning itself has a significant carbon footprint (Berners-Lee, 2020). Additionally, blended learning has implications for inclusion through enabling more flexible learning patterns to support the different lifestyles of a diverse student cohort. However, effective online learning and assessment requires access to quality hardware, software and internet provision, and the dangers of digital exclusion, particularly those from non-traditional backgrounds, should not be overlooked, highlighting the tensions and trade-offs with any new initiative.

The academic and student community's response to the pandemic has demonstrated that we can change and adapt, and this suggests that we do have the capabilities to respond to the urgent sustainability challenges that society faces. Reflection on our individual and societal response to the pandemic, including our move to online working, learning and assessment, can provide a fruitful context for developing further sustainability competencies, such as dealing with risks and changes, and questioning norms and practices reflected in futures and critical thinking competencies. Reflections on these changes will further empower us and our students to be agents of change.

Inclusion

Inclusion in the context of higher education assessment relates to the accessibility and fairness of assessment to those with physical and learning disabilities, or those from socio-economic disadvantaged and non-traditional backgrounds. Universal Design for Learning (Morris et al, 2019) or Universal Instructional Design (Silver et al, 1998) encompass the idea of designing assessment that places accessibility issues as an integral component of curriculum design, with the premise that implementation of solutions to address inclusion issues can be beneficial for all students (Silver et al, 1998).

We have shown how an individual experiential reflection assessment can address some of the sustainability competency learning outcomes associated with a residential visit to an Eco-Centre, while also potentially enhancing inclusion through addressing challenges of residential field courses for some students. We have indicated how using an established framework (Belbin, 2004) to focus on understanding the importance of diverse roles and how different individual strengths contribute to developing collaborative competency, can help overcome the challenges of diversity and perceptions of uneven contribution in student group processes. We have also shown how inclusion and diversity can be built into assessment through providing flexible assessment methods allowing students choice.

However, these innovations are not without their tensions: replacing residential activities with individual reflective activities can reduce the development of social cohesion and collaborative competency. ‘Free-riding’ students may legitimise limited engagement in the group process through their ‘group role preferences’ and not seek to improve skills in areas they find challenging. Student choice in assessment must be balanced with the need to develop a wide range of life and employability skills (Morris et al, 2019). Therefore, consideration of inclusion in assessment design also needs to be balanced against other factors.

Developing sustainability competencies for future responsible leaders

Assessments can be used by educators to evaluate whether a learning activity itself is effective in developing the desired competencies. These case studies have demonstrated how incorporating the sustainability competency framework into assessment design may go some way in addressing the lack of widely accepted approaches to measure the effectiveness of ESD initiatives or competency development (Besong and Holland, 2015; Waltner, Rieß, and Mischo, 2019). These case studies highlight also how reference to the sustainability competency framework can help evaluate the effectiveness of the learning activity in developing sustainability competences, identify improvements and hence improve the effectiveness of ESD initiatives.

The importance of reflection

All three case studies incorporate an element of reflection in the assessment design. Reflective writing assessments are a powerful means to drive deeper-level understanding (Moon, 1999). Self-awareness, which is developed through reflection, is a key sustainability competency in its own right, and reflection is also included as learning outcomes in several other sustainability competencies (QAA and Advance HE, 2021), highlighting the importance of reflective writing assessments to sustainability competency development.

Reflection and self-awareness is also important in addressing issues of inclusion and learning from the changes engendered by the pandemic. Rapanta et al (2020, 939) highlight the need for 'self-regulation' as part of effective online learning, and how this can be supported through reflective writing. Developing reflective learners through curriculum assessments may help embed a habit of reflection in students that they use outside of the formal curriculum and in their future professional lives, enhancing their continual learning and development.

Although developing reflective practice through assessment is clearly important, it can be difficult to create a valid and robust assessment framework for reflective writing, creating difficulties in marking (Clarkeburn and Kettula, 2012; Puntha, Touboulic and Wall, 2020). Decisions need to be made as to whether marking criteria are focused on the ability to reflect or what is reflected upon (Clarkeburn and Kettula, 2012). Table 4 presents an adaptation of Puntha, Touboulic and Wall's (2020) marking criteria to illustrate how different sustainability competencies can be explicitly incorporated into a quantified marking criteria matrix as one approach that could be used to support the marking of reflective writing assessments.

Table 4: Marking criteria applied to reflective writing through a blog (adapted from Puntha, Touboulic and Wall, 2020)

Systems thinking competency (knowledge and understanding): use of knowledge of relevant concepts and literature, demonstrating an understanding of the dimensions of the discipline/ topic/sustainability and their inter-relationships.	20%
Integrated problem solving competency (research and inquiry): locating current information and research, demonstrating appropriate research skills and use of a variety of sources, engaging with material and framing a relevant question/problem/solution.	30%
Critical thinking competency (critical reasoning) and self-awareness competency: demonstrate an evaluation of information, synthesis and combination of different viewpoints, clear and evidence-based analysis; engage in reflection and draw consistent recommendations.	30%
Communication skills and normative competency: ability to effectively communicate knowledge, values and critical understanding through the use of appropriate communication.	20%

These case studies have explored the intersection of a transition to online learning, inclusion issues, and the development of sustainability competencies. The analysis of these case studies highlights the complexity of assessment design and the potential tensions, trade-offs and challenges in attempting to integrate these diverse considerations, also highlighting the need to develop a systems-thinking approach – a key sustainability competency – within our assessment design.

Conclusion and recommendations

The impact of the pandemic on the higher education sector has demonstrated the need to be able to adapt assessments to changing delivery contexts while also managing issues of diversity and inclusion, and delivering desired learning outcomes. The pandemic has provided us with an opportunity to rethink how we assess. The case studies demonstrate that desired learning outcomes, here framed around sustainability competencies, can be achieved even while rapidly rethinking existing practice. In this time of change, we have an opportunity to rethink our assessment as part of a curriculum design that embraces both equality and inclusion but also the competencies that will enable the development of future-fit and responsible leaders.

To support our students to develop sustainability competencies and to learn to be future-fit leaders, we need to consider how our assessment drives sustainability competency development as well as how we assess the achievement of these competencies. This enables us to evaluate the effectiveness of our curriculum and assessment in achieving our ESD goals. Transformative education is needed as a planetary response to the climate and ecological crisis at the same time as social inequality is addressed (Odell et al, 2020). This calls for educators to reflect on the learning outcomes they have set and to design innovative assessment methods that contribute to improving society through future-fit and responsible leaders.

We make the following recommendations for educational practitioners.

1. **Incorporate reflective assessments** to help develop self-awareness competency and promote deeper learning. Careful framing of reflective questions can also help develop several other learning outcomes and sustainability competencies.
2. **Involve students in the assessment process** through peer feedback processes to develop students as autonomous learners and promote self-awareness and collaborative competencies.
3. **Use frameworks to critically evaluate assessments** and reflect on how assessments can be improved to develop a wider range of learning outcomes, and a greater range of relevant competencies for society's future leaders.
4. **Frame assessments around solving real world problems** to enable work-relevant assessments, empowering students to drive change and develop the confidence they need to become society's future leaders.
5. **Embrace change** – use the changes forced upon us by the pandemic to rethink and improve practice and use our assessment design to 'build back better'.

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