

The changing landscape of assessment: some possible replacements for unseen, time-constrained, face-to-face invigilated exams

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Introduction

In Spring 2020, just about every university in the world was faced with a requirement to move from a substantial diet of assessing student learning on campus, in person, to methodologies that could be undertaken remotely due to the Coronavirus shutdown. Higher Education Institutions (HEIs) moved at breakneck speed to introduce new ways of assessing remotely, aiming first and foremost to ensure that no student was disadvantaged in the current crisis conditions, while at the same time ensuring quality imperatives were met. Achieving this target was undertaken notwithstanding substantial challenges, with HEIs ensuring that the perfect did not become the enemy of the achievable. The changes were often radical, innovative and creative, and there has been a huge upsurge of feeling that in reverting back to more normal conditions, the benefits of new approaches must be retained and decisions made under pressure would not be reversed without thinking through how to ensure that the long term effect on university assessment is beneficial.

Some assessment formats proved particularly challenging and onerous to rapidly switch, including, for instance, making emergency plans for a substantial diet of unseen, time-constrained, invigilated exams to be undertaken remotely. This is the area we predominantly address in this current piece, although we will also touch upon assessments that are normally undertaken on-site but which couldn't be held due to lockdown. This current guidance note builds on our earlier work on '**Contingency planning: exploring rapid alternatives to face to face assessment**' and '**Fifty tips for replacements for time-constrained, invigilated on-site exams**' (Brown and Sambell, 2020 a and b), both of which were produced in the earliest stages of the rapid switch. The aim is now to help those who are currently planning for a phased, socially-distanced and gradual return to campus at a point when the precise picture for the immediate future is still pretty uncertain and likely to change on a daily basis. This practitioner-orientated advice, with its **comparative table of pros and cons of alternative forms of assessment** below therefore, aims to act as a catalyst for teaching teams who wish to pause and think about possible adjustments to traditionally-held face-to-face assessment regimes for the academic sessions which are due to begin in a matter of weeks. While this planning phase is less frantic in one sense, in another sense, we still face the massive challenge of preparing for future uncertainty. Strict lockdown measures may, for example, be relaxed soon only to be enforced once again with the arrival of new virus spikes, and campus-based life seems likely to be under considerable pressure for some time to come, with priority attention for students' physical access to campuses initially

trained on those aspects of teaching and assessment practice that are impossible to be delivered online, for the time being at least. The sensible option is likely to be to plan to make the very best of remote delivery, if needs be in case of future setbacks. Thus, in what follows we propose some important areas to critically review and reflect upon in the time available for adjustments which colleagues could make in a matter of weeks. In other words, we are still working, for the foreseeable future, under the umbrella of the emergency approvals and regulations procedures that universities have been instigating, so the guidance note assumes that any changes suggested here will be undertaken on that basis.

The current pandemic has undoubtedly exposed some of the practical frailties of on-site existing assessment practice, which could in the longer term valuably become more authentic, fit-for-purpose, robust and resilient. But the immediate response across the sector has also highlighted some extremely positive opportunities for those who seek to modernise assessment in order to promote student learning more readily. Here we now seek to focus, primarily, on some of the possibilities for educationally positive immediate changes that could be made as an initial step, and to highlight some relatively modest adjustments to some routine assessment scenarios which might help colleagues to cope with the demands of the upcoming academic year 2020/21 and may also allow us to strengthen and intensify the features of assessment that can **actually improve student learning**.

Building Bridges to the Future: Assessment which Promotes Learning

The RSA argue that there are transformational opportunities that can lead to lasting change for the good coming out of the current crisis:

“As we think of ‘bridges to the future’, we are thinking too of the variety of measures and activities that have been put in place during the crisis response, from those which may be most promising signs of new ways of doing things to those we see as only ever temporary.” (RSA,2020).

They suggest four potential post-crisis response measures:

- **End:** We’ve done these things to respond to immediate demands, but they are specific to the crisis;
- **Restart:** We’ve had to stop these things to focus on the crisis, but they need to be picked up in some form;
- **Let go:** We’ve been unable to stop doing things that were already or are now unfit for purpose;
- **Amplify:** We’ve been able to try these new things and they show some signs of promise for the future.

In this guide we focus, then, predominantly, on accentuating the latter.

Our guidance is underpinned, as far as possible, by evidence-informed approaches on what works in other contexts to support this new endeavour, with the additional aim to design and implement good fit-for-purpose educational practices which sustain beyond the immediate dilemmas posed by the pandemic. To do so we argue that:

- a. Old-style traditional exams could be used more **rarely**, recognising that all-too-often they have limited value as authentic assessment methodologies. A case will need to be made as to why these are used, rather than relying on them as the default methodology.
- b. As part of techniques to **risk-assess and design for future crisis planning**, where these types of exams are used, questions will need to be designed in future that can readily be adapted for use in different scenarios, i.e. face-to-face on site, remotely managed or virtually.
- c. The **language of assessment questions** should be radically reviewed to focus less on recollection and memorisation of information, and more on its usage within specific contexts: we need to consider the 'learning outcomes' required by each exam question to promote more explaining, reasoning, applying and arguing, and less describing and listing (Hendry 2020)
- d. There should be a greater reliance on **reflection on practice** in examinations to ensure that students' alignment with the work being produced is authenticated.
- e. Greater use be made of **asynchronous** assessments, since these are less susceptible to crisis contexts, and can cope better with students accessing exams in different time zones. Where time-constrained synchronous exams are deemed vital, however, it could be a prudent as well as an educationally valid strategy to plan to **prerelease** materials for students to work on, so that the timed examination window itself focuses on their ability to use their preparations in ways that require them to think on their feet (after Allan, 2020).
- f. **Feedback** processes should become an important and integral part of assessment practices and be built carefully into any redesigns.
- g. Exam-based assessment should not result in '**sudden death**' of students' progress and life chances, with less reliance on performance on a single occasion with unseen tests.

- h. Off-site exam questions should have **clear notional workloads** (e.g. if 24 hours are allowed, a guidance note could indicate that students are expected to spend no more than three on the task) and **prescribed word counts** (otherwise the workload for the markers is likely to be unmanageable).
- i. Replacements to exams must be **inclusive** and allow for reasonable adjustments for students with special or additional needs, as indeed do current exams, so has your team thought through some of the benefits, as well as the challenges, or opportunities to adjust assessment formats now?

Next, in the main body of the paper we review some of the options and adjustments we have seen used locally and globally to adjust on-site exams for remote working. We draw extensively on scholarship in the area, to integrate assessment more fully into the learning experiences of students. Some of the methods we discuss are already widely used in many HEIs around the world and some are newly minted as a result of the Coronavirus crisis. We set out below some descriptions of the methodology, together with advantages and disadvantages of each and some key points to note if you plan to adjust or replace unseen time-constrained invigilated exams and other site-constrained methodologies with these approaches. We particularly focus, where possible, on alternatives which promote assessment's **authenticity**. Building on Arnold (2019) and Sambell, McDowell and Montgomery (2013), we take authenticity to include 'employability', academic integrity and the development of professional skills (Sotiradou et al, 2019), but also to embrace other forms of realism, such as application of subject-knowledge to the local community, or learners developing the disciplinary ways of thinking and practicing of our research communities. Authenticity also implies, for us, an appropriate level of cognitive challenge, and the development of evaluative judgment which is the lynchpin of lifelong learning (Villaroel et al, 2020). Ideally, going forward, it also will find better ways to embrace authentic feedback processes (Dawson, Carless and Lee, 2020). We also draw attention, where appropriate, to the longer-term possibilities for universal design and tactics which address issues of inclusivity. At the end we provide a range of references, including some very useful resources that have been produced at speed in these unprecedented and challenging times.

Alternative assessment methods that have been used to replace on-site exams: what are they?	Advantages	Disadvantages	Points to note
<p>Take-home papers and open-book exams. These are accessed online, completed, and then submitted by a specific deadline. They require appropriately designed questions that don't over-rely on memory and recall, but instead on interpretation and analysis. Students are required to complete questions during a set period e.g. 24 hours, 1 week etc.</p> <p>Take-home papers typically have a window of time from release until the submission deadline, often 24-48 hours or more, so that students can choose when complete the paper and submit their work. Open-book exams, (when originally designed as such) usually have a more defined period, perhaps two hours plus some time to upload</p>	<p>Without reliance on memorizing, the focus moves from recollection to <i>usage</i> of information, so the formats are potentially much more authentic. Can be implemented relatively easily in different environments and contexts. Can allow students to make successively better drafts. Can require fewer 'reasonable adjustments' for students who need these in traditional invigilated exams Are more accessible for those who may typically struggle with the practical aspects associated with time-constrained paper-based written exams. Can remove stress for students who don't thrive in the 'sudden death'</p>	<p>Some students will write at excessive length, packing all they can find into their answers without recognizing that different approaches are needed for this kind of paper. This makes marking unmanageable. Can disadvantage students with hectic home lives, with poor internet access or limited IT kit (some just work on phones). The tight time-limit compared to a standard assignment can be hugely stressful for some students. Raises concerns about whose work is actually being submitted.</p>	<p>Designing good questions is a skill which teachers need to practise to develop effectively.</p> <p>It's important to guide students about how long is reasonable to spend on the task (some will think that they have to work flat out for the allocated 24 hours), and to provide a word limit. Students are likely to need guidance on what referencing standards you require: as used in a traditional exam (i.e. barely) or full references as required in a standard assignment.</p> <p>Students might also need support in writing under very tight time constraints see Webster and Crow (2020).</p> <p>See Woods (2020) – on which this section draws – for guidance to students on preparing to undertake take-home or open book exams. See also Heriot Watt University guidance on preparing for open book exams (Buckley, 2020) and our earlier 50 Tips guidance note (Brown & Sambell, 2020b)</p>

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<p>answers, but the key point is that students can access materials during the exam, so they require appropriate question-setting and student preparation.</p>	<p>environment of the traditional exam hall. Can help reframe learning for students who adopt surface approaches to learning in order to ‘cram’ purely for unseen exam questions, rather than assimilate knowledge for longer term application.</p>		<p>Some thought required to build in mechanisms for verifying it’s the students’ own work.</p>
<p>Computer-supported tests such as multiple-choice questions (MCQs) used summatively</p> <p>In time-honoured and widely used MCQ formats, students answer questions and submit them on-line.</p> <p>MCQs often ask students to choose the correct answer from say five presented, although a variety of other computer-supported formats are widely used including</p>	<p>Very efficient at quick testing of factual material.</p> <p>Very well suited to large cohorts.</p> <p>Marking is automated, straightforward and fast.</p> <p>There is a good track record of their usage summatively in disciplines including Medicine and Engineering.</p> <p>Content coverage rather</p>	<p>Where MCQs are used summatively, there may be issues around security unless some form of remote invigilation/ proctoring is used.</p> <p>Question design is time consuming and questions must be piloted extensively to determine facility values and discrimination indices to select which questions are suitable to include in summative tests.</p> <p>Needs sound expertise in question design, subject</p>	<p>While marking is automated, the vast amount of workload is front-loaded in the design, preparation and testing of questions.</p> <p>The Open University has many years’ experience of good practice in this area. They widely use questions which are multipart, the first seeking the correct or best answer, the second part seeking the rationale for the choice, potentially a third requiring students to say how certain they are that the answer is correct. Proprietary systems are likely to be needed to ensure summative assessments are secure e.g. Bjerrum</p>

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<p>'best match' questions, 'drag and drop' questions, labelling diagrams, marking crucial points on graphs, answering questions on case study scenarios, completing text by filling in gaps in cloze question formats, and many others.</p>	<p>than question-spotting is good.</p>	<p>content, and technology to support it.</p> <p>Innovative computer-supported testing activities require extensive expertise and piloting to make them effective.</p> <p>Poorly designed questions make passing by guesswork easy.</p> <p>If you want students completing the tests online worldwide simultaneously for security reasons, some students will be being assessed at unsocial hours.</p>	<p>Nielsen (2020a and b), Darcy Norman (2020).</p> <p>There are excellent opportunities to use MCQs for formative assessment as part of learning.</p> <p>See the JISC (2015) guide to transforming assessment and feedback.</p>
<p>Electronic or hard-copy Portfolios Students submit collections of evidence in hard copy format or more usually nowadays electronic format demonstrating the</p>	<p>They allow learners to present wide-ranging evidence of achievement, and to show originality and creativity alongside mastery of subject knowledge.</p>	<p>Hard copy portfolios tend to be bulky to submit, handle and store.</p> <p>Portfolios take time to mark, especially if volume/length constraints are not provided.</p>	<p>A variety of sophisticated software packages e.g. Mahara, Pebblepad, Google, etc. can be used, to make it easier for students to collect and structure portfolio elements.</p> <p>Provide clear guidance on maximum</p>

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<p>achievement of the course learning outcomes through systematically structured evidence.</p> <p>They are particularly useful in practical/ applied disciplines where evidence can be provided in very diverse forms including text, image, video, audio, practice notebooks etc.</p>	<p>Portfolios can be maintained over a considerable time scale, and show development, and can be useful evidence of achievement to show to prospective employers, so authenticity can be high.</p> <p>Digital formats especially amenable to designing-in and tracking dialogic feedback processes, including uptake/subsequent action over time.</p> <p>The personalized nature of the portfolio can also help to ‘design out’ plagiarism, by promoting a sense of student voice/ownership and, hence, promote academic integrity (cf Hendry 2020).</p>	<p>Assessment reliability can be quite low as different assessors tend to look for different things when assessing wide-ranging evidence of achievement.</p>	<p>timings for video/audio material included otherwise assessors can spend many hours scrolling through material.</p> <p>Some HEIs require students to provide a matrix demonstrating how evidence aligns with learning outcomes alongside a guide to the evidence provided in the portfolio, advising students that assessors will rely strongly on these to help them select which evidence to sample (i.e. they don’t promise to read/ view every word of the whole portfolio). You might, additionally, ask learners to submit an executive summary, self-evaluation or similar, in which you require them to reflect on where, and how, their portfolio components demonstrate they meet the Learning Outcomes/criteria or critically review what has been learned. You may need to support students to appreciate what critical reflection or critical thinking looks like (Webster, 2020)</p> <p>As with many innovative formats, assignment checklists (Gordon, 2020) can help guide student effort appropriately</p>

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			<p>and aid the marking process, too.</p> <p>It's useful to consider issues of curation, feedback processes and whole-of-programme focus to maximise ongoing developmental learning opportunities, as opposed to having an exclusive focus on recording achievement (see Clarke and Boud, 2018).</p>
<p>Viva voce individual oral tests or interviews via WebEx, Skype, Teams or similar.</p> <p>Students individually, or in groups, are required in real time to answer questions from one or more examiner on prepared topics. Sometimes questions are preceded by a short presentation from the examinee. When on-site vivas are not practical, we need to move to virtual formats (as has been the</p>	<p>Allows probing questions to check for understanding. Widely used for high-stakes assessment, such as at doctoral and Master's students and readily usable virtually by other levels.</p> <p>Regarded as authentic, as many careers and professions may depend on face-to-face skills at answering questions and giving persuasive explanations.</p> <p>The face-to-face/ live virtual dimension allows</p>	<p>With large cohorts, managing virtual vivas can be hugely time consuming so impractical. Some candidates can be let-down by nerves in face-to-face interactions.</p> <p>Technical difficulties with broadband connections and live links are unpredictable and can be hugely disruptive. Students with greater social capital and advantage are likely to do better than other students.</p> <p>Students with voice impairments may not do</p>	<p>Joughin (2010) proposes a strong case for increased use of oral assessment as part of a balanced range of assessment methods in present-day contexts.</p> <p>As with all forms of innovative assessment on any programme, students may need guidance on how best to undertake a viva as well as practice opportunities with feedback (maybe including peer feedback) to ensure confidence.</p> <p>As with any other form of live assessment, recordings or other forms of documentation of the events will be needed for quality assurance/external</p>

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<p>case for example with international PhD examinations for some years).</p>	<p>assessors to gauge students' speed and confidence at answering questions in 'real time', even virtually, in contrast to most other assessment methods.</p> <p>Probing questions can be used, e.g. 'how else...?', 'why else' and so on, to explore students' depth of knowledge (cognitive challenge).</p> <p>Virtual vivas can enable recordings to be made which are useful not only for quality assurance purposes but also, with permission, as resources for future students.</p>	<p>themselves justice, and hesitation (e.g. from stammering) may be misinterpreted as lack of knowledge.</p> <p>Difficult to guarantee fairness between candidates, especially when variations in levels of probing occur.</p> <p>Where students are vivad in groups, there may be issues around apportioning the contributions fairly.</p>	<p>examining purposes.</p> <p>Consider scaffolding student learning via, say, a series of authentic assessment tasks which culminate in interactive oral assessments. (See Logan, D., et al, 2017).</p>
<p>Virtual OSCEs (Objective Structured Clinical Exams)</p> <p>Students are in normal circumstances required to</p>	<p>OSCEs are highly regarded as authentic, valid and reliable assessment processes in medical and clinical</p>	<p>OSCEs rely on a substantial amount of preparation and set up which is time consuming.</p> <p>Where multiple assessors are</p>	<p>New approaches to virtual OSCEs are likely to need teams to design them with diverse expertise e.g. subject specialists, virtual reality experts, video production staff and so on but the outputs are</p>

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<p>undertake a series of tasks in sequence whereby they demonstrate a wide range of skills and capabilities, often in a single assessment hall. The processes have been widely used in medical professions, and also adapted into other disciplines (Business, Policing, Hospitality and Tourism etc) for many years. Post-Covid19, we will need to be creative in finding ways to emulate the experience virtually, e.g. using virtual rather than live simulated patients, by presenting lab test data on screen rather than on live instruments and so on.</p>	<p>education but the process can readily be extended to contexts such as business, policing, law etc. They allow candidates to be tested on high-level skills, in authentic contexts (e.g. interpreting X-rays/lab results, interviewing virtual patients, instrument use simulations, interpreting case notes, making diagnoses, deciding on prescriptions etc.). Assessment can be quite quick when detailed rubrics have been developed for an OSCE.</p>	<p>involved, inter-assessor reliability can be problematic. Moving OSCEs online can have substantial challenges as much of the testing in conventional OSCEs relied on using live contexts Like traditional exams, they can depend on ability ‘on the day’ rather than ongoing ability – nervousness can come into play.</p>	<p>ultimately likely to form banks of Reusable Learning Resources adaptable for teaching as well as for subsequent assessment tasks.</p>
<p>Patchwork assessment</p> <p>”The essence of a patchwork is that it consists of a variety of small sections, each of</p>	<p>Universal design principles readily apply:- Takes account of the different ways students learn and are able to</p>	<p>Can’t simply be ‘dropped in’ as a replacement assignment as it needs to be fully integrated with pedagogical approaches.</p>	<p>See Jones- Devitt et al (2017) on which this section draws, for detailed guidance, including: Initial briefing, student preparation and preparatory workshops on reflective</p>

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<p>which is complete in itself, and that the overall unity of these component sections, although planned in advance, is finalized retrospectively, when they are ‘stitched together’.” (Winter 2003: 112) Each ‘patch’ is carefully designed, as part of a larger pattern, to act as a pivotal learning moment (so patchwork assessment isn’t synonymous with portfolio assessment). Patchwork processes involve students in the ongoing and cumulative formative production of their materials, whereby meanings are linked and built by the student over time. Patches are ultimately stitched together to produce a fully-justified summative account, which is submitted for marking.</p>	<p>express their learning in various ways; Fosters continuous development and application over time; Allows for diversity: enables students to meet relevant learning outcomes in a format of their own choosing, according to their own perceived areas of strength; Always owned by the student, who selects, critiques and justifies the work, making it an authentic and (inclusive) approach to assessment.</p> <p>Allows for creativity and gradual development - final ‘stitching’ patch encourages students to integrate their understanding of the whole module, or integrated across programme of</p>	<p>Students may need significant briefing and guidance on how to achieve what may be to them an unfamiliar task</p> <p>Students may resist the process, as it is unfamiliar and less teacher-directed and led than other more familiar formats they’re used to.</p> <p>Takes substantial and careful preparation in advance on your part to ensure that students form a sense of the pattern, pace and scale which underpins the whole process.</p>	<p>writing, peer review processes, feedback literacy and appropriate skills development are essential – to build student confidence and appreciation of the process.</p> <p>Carefully design the patches to link to the intended learning outcomes and articulate the skills you anticipate students will develop (e.g. synthesis, creative thinking, criticality). Brief students clearly about this.</p> <p>Think carefully about the timing of the patches and think through the relevant logistics- e.g. is there an overarching theme to the ‘stitching’? Do you anticipate students having free choice in all or just some selection of patches and content? It can be a good idea to decide core and optional elements in advance and to make these clear to students.</p> <p>Start small if you’re unfamiliar with the approach.</p> <p>Check out whether suitable technological</p>

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	<p>study. Highly amenable to digital production, which enables sharing, discussion, peer review and developmental feedback processes to be threaded throughout. Flexible and evolving process which is responsive to change. Provides vehicle in which to extend personal, professional and theoretical boundaries – process can valuably be used to disturb assumptions about knowledge and how it can be applied to a real-life context/issue.</p> <p>Draws on personal knowledge, therefore harder to farm out to essay mills. Feedback, reflection and development of evaluative</p>		<p>infrastructures and systems are in place and troubleshoot them with regard to your designs.</p> <p>Establish clear processes for sharing and reviewing each patch so feedback feeds forward to the next patch. Tailor patch themes to authentic contexts e.g. consider professional practice from client's viewpoint, create an information leaflet, critique an article from a professional journal, review current news items, analyse data... (Arnold et al, 2009).</p> <p>Indicate some sample genres so students get the idea e.g. series of Q and A, a letter of application, a press release.</p> <p>Discuss exemplars and run FAQs.</p> <p>Guide the overall synthesis clearly and engage students meaningfully with assessment criteria and standards</p>

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	judgment/metacognition are integral to the design (see Ghandi, 2016).		
<p>Blogs Students are required to post, on a university site or elsewhere – often 1,000-word blogs by a particular date for summative assessment, and as part of the assignment, they comment productively on say two other student's blogs.</p>	<p>They can provide an invaluable online record of student work, offering opportunities to be reflective, improving writing and analytic skills, and enhancing student learning (Radclyffe Thomas 2012) and promoting academic integrity. Many students are already blogging and so the context is reasonably familiar for them. Since they are relatively short in length, they are likely to be manageable to mark. Blogs can have a professional focus to heighten authenticity.</p>	<p>Students may need guidance on register, references and tone to adopt: we suggest informal without being chatty or scatological. If sites where blogs are posted are unstable, they may be difficult to access post hoc. Some colleagues/quality assurers, PSRBs etc. may need convincing that blogs are serious academic tasks.</p>	<p>Hughes and Parnell, (2008) argue that blogs can be a vehicle for reflective learning and that writing frames can be used to help organize writing.</p>
Publications	This can be a very	Full length journal articles are	Students will need careful briefing of

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<p>Students are asked to write as if for journal, newsletter or magazine submissions, with staff using their Guides for Authors to shape assessment criteria.</p>	<p>authentic assessment method, of which students can recognise the value. They can helpfully prescribe wordage, referencing, style etc. By emulating the writing of published resources, students may develop a better appreciation of how journal articles are organised and structured, which might make them more usable in their information searches.</p>	<p>rather lengthy to assess. Students may see the task as rather daunting and the requirements may be unfamiliar.</p>	<p>requirements so they can fully appreciate the task. A side benefit is that if they are really good, the student can consider submitting for actual publication: quite a few do, and some succeed. Some journals for undergraduate research https://www.bcur.org/research/undergraduate-journals or student engagement also provide useful opportunities.</p>
<p>Rough guides, leaflets and other public documents/outputs</p> <p>As an alternative to producing a published paper, students can be asked to produce a guide, infographic, graphic novel, video, explainer, diagrams with exploded text, workshop guide, instruction</p>	<p>Students can often see the point of preparing outputs which have the potential for actually being used by the target group, as opposed to jumping through assessment hoops simply to please a marker.</p> <p>Where these are applied (e.g. a guide for</p>	<p>Students can get carried away with the novelty of the format, so guidance is important.</p>	<p>It might be a good idea to require students to submit assignment checklists which help guide them to consider all the key features you are looking for (Gordon, 2020). If these are generated in advance by the teaching team in dialogue this will help ensure staff have shared expectations and standards.</p> <p>Involve students with the assessment criteria (e.g. via co-production exercises</p>

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<p>manual or similar, which educates a specified audience about a complex topic. These can be undertaken individually as 'chapters,' which are collated into a folio/booklet to encourage collaboration.</p>	<p>professionals, or members of public etc.) these can be highly motivating.</p> <p>Drafts and finished versions are amenable to submit for review and constructive feedback from a range of audiences, including the intended audience.</p> <p>Readily adaptable to promote and foster collaborative, asynchronous approaches to (online) working within peer groups, thus building learning communities (especially important when remote working likely).</p>		<p>or in guided discussion) so they are clear about the standards, meanings and relevant weightings of criteria and can use them to evaluate their own work in progress.</p>
<p>Video/audio recordings, podcasts Students can be required to submit data files containing their video/ audio recordings,</p>	<p>Students can see the value of producing outputs in what they are likely to use as a very 21st Century medium.</p>	<p>Students may not at first realise how much work is needed to prepare for, plan and deliver a seemingly informal output like a</p>	<p>As with other innovative assessment media, good briefing, training, discussion and rehearsal are imperative.</p> <p>It is important that assessment criteria are</p>

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and podcasts that provide evidence of achievement of specific learning outcomes.	These are likely to be relatively difficult to plagiarize or farm out to essay mills. Allows more flexibility and choice than traditional pen-and-paper approaches (inclusivity).	broadcast and may consequently leave it up to the last minute. Conversely, they may concentrate so much on the medium that they neglect the message. There can be technical issues about recording and data files might be very large to submit electronically. There can be substantial problems concerning 'digital equity' in that some students will have significantly better access to good quality kit than others.	based on students' capability, expertise and knowledge rather than technical specifications when they are working from home without access to loan equipment.
Evaluative comparisons and judgments Staff can set evaluative tasks which require students to carefully choose and evaluate say 3 websites or similar on a given topic (after Hendry, 2020).	Careful and challenging question-setting for tightly focused assessment tasks (see right-hand column for concrete suggestions) can focus students on achieving high-order learning outcomes while focusing on choosing	Students who have previously become familiar with tried and tested surface approaches to gathering academic material for their reports or essays may need support/briefing and practice in tackling the task effectively.	Hendry (2020) advises: "Avoid: "Explain the effects of obesity on public health". Instead use: "Create a set of five criteria and standards for judging the quality of websites about obesity, and apply your criteria/standards to three websites, one of which is the best and one of which is the worst" (adapted from 'Designing out

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	<p>personalised source materials to evaluate/review.</p> <p>Students are likely to perceive that the task requires original thought and their own voice, so boosting a sense of academic integrity and authenticity, as well as allowing you to spot similarities.</p> <p>Avoids students simply cutting and pasting from the wealth of material they can find, while allowing students the flexibility to source a variety of material (rather than rely on a few sources).</p>	<p>If the task involves sustained access to websites or data bases, digital equity may be an issue.</p>	<p>plagiarism: A brief guide for busy academics', University of Surrey)</p> <p>Avoid: "Compare and contrast economic theories X and Y".</p> <p>Instead use: "Locate three websites or printed texts that deal with X economic theory, then contrast the views expressed in these sources with the economic situation in country Y, and make recommendations for this country's economic future" (adapted from Carroll, J., & Appleton, J., 2001, 'Plagiarism: A good practice guide')</p>
Reflective Journals Students are required to write about their experiences and/or practice, relating it to their reading and knowledge	Reflective writing can be a powerful means of enabling students to demonstrate complex learning outcomes	Students may not fully understand what is required of them in reflective writing. Many students, at the start at least, write extensively and	Students might find Godfrey (2020) useful in understanding what critical analysis and reflection mean in academia. Carefully-guided discussion of illustrative exemplars useful.

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<p>gained from to their classes and providing critical analysis of what they have learned.</p>	<p>including critical thinking.</p> <p>Students can deepen their learning by reflection, and can demonstrate analysis, creativity and originality.</p> <p>When reflective journaling works well, students continually develop their learning through reflection.</p> <p>Such analytic abilities can enhance employability and develop evaluative judgement.</p>	<p>uncritically and may need extensive guidance on how to write more systematically. Unless constraints are required, the length of their writing may make marking unmanageable.</p> <p>Some students may feel they need to write what they think you want to read.</p>	<p>It can be really helpful to suggest tight suggested word limits on several sections to produce a critical incident account as a starting point to reflective writing e.g.: Choose and outline an incident that you have experienced in your last placement (200 words). Describe the context in which you were working (200 words). What action did you take? (200 words) Why did you choose that particular course of action? (200 words). How did your choice of actions relate to your university classes and reading in the area? (200 words including at least 3 references). How would you do things differently next time? (200 words). What did you learn from this experience? (200 words). How were you changed (if at all) in your orientation and approach by this, or were your previous convictions borne out? (200 words).</p>
<p>Annotated bibliographies Students are required to list</p>	<p>This is a useful way to engage students with the</p>	<p>Students may find themselves overwhelmed by the sheer</p>	<p>A collection of annotated bibliographies can be turned into a resource-bank and</p>

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<p>and discuss a number of references on a particular topic, explaining how they located them, why they chose these rather than other references, what they learned from them and how they can apply the learning to their particular contexts. They are often used early in a programme when students are learning how to manage information prior to essay writing.</p>	<p>relevant literature, rather than just collecting information on it, thereby building information literacy. Candidates can demonstrate their depth of study of the sources and the breadth of the source material they have reviewed. Plagiarism is limited. Although students may choose the same sources, it would be easy to spot identical annotations.</p>	<p>range of resources available and may have poor information retrieval skills at the outset. Some students from cultures where set texts are used, or where teachers mandate the reference sources they are to use, may find the open-endedness of the task scary.</p>	<p>issued to future students as a starting place for them to develop their own bibliographies.</p>
<p>In-tray/box exercises Students are presented with a hard copy or virtual dossier of documents and other resources to review well before the exam with no idea of the questions being asked. They are given ample time to review and annotate these resources in preparation.</p>	<p>This kind of assessment is strong on authenticity, as it measures the skills the candidates will need in their future careers. Students can demonstrate their fitness-to-practice by justifying how they would decide to do what they chose to do.</p>	<p>There tends to be a great deal of preparation in putting together the documents and materials required (although the resources can be used in a modified form in future years if the questions and incidents are different). If real-time incidents are</p>	<p>In-tray exercises in paper form have been used for many years in many contents including Accountancy and medicine. The drawback of hard copy unseen versions tended to be the complexity of providing paper documents for each candidate within the exam setting: this is no longer a problem if virtual assessments are undertaken.</p>

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<p>When the question is presented, they respond to the situation, drawing on the resources in the dossier to support their choices of actions/ recommendations in a time constrained context. For example, in a Nursing exam, students could be provided with a typical ward managers in-box for the day and be asked to draw up staff rotas, drug rounds etc. for the day. To make the exam as authentic as possible part way through the exam they could be asked to respond in real time to changing context e.g a road traffic accident and say how their work plans/ priorities would change and why.</p> <p>Another variation to the in-tray exam could be to ask students to work on preleased material, such as a</p>	<p>If the reading/preparatory opportunity is offered in advance and tasks/new incidents are represented in real time this approach mitigates against plagiarism and tends to be regarded as a fair judgment of students' abilities to think on the spot. Pre-release also allows more time for reading, for those who require it (traditional in-trey exams expect students to read the dossier in the first part of a timed exam period).</p>	<p>offered mid exam to test students' flexibility, these are reliant on students' ready access to secure and stable internet links.</p>	

Alternative assessment methods that have been used to replace on-site exams: what are they?	Advantages	Disadvantages	Points to note
<p>case study, which students are then asked to critique under exam conditions. Alternatively, they could be asked to design a resource or a strategic plan in advance, and in the exam they are then asked to adjust it to accommodate a 'curveball' to the original scenario, such as needing to respond to a pandemic, or new policy guidelines, as a test of their ability to think critically, and think on their feet (after Allan, 2020).</p>			
<p>Creative Artefacts Traditional written exams are rarely used in many subjects aligned to the creative industries, but the current situation has shown many problems with on-site assessments which may include for example, sculptures, paintings,</p>	<p>Assessment of artefacts such as these is high on validity and authenticity. Artefacts are useful as evidence of achievement to show prospective employers. Reflective commentaries on work in progress can help demonstrate the</p>	<p>It's really hard to assure inter-assessor reliability unless criteria are really effectively negotiated and shared among the assessment team (see HEA (2012) Tenet 4 on constructing shared standards in communities.</p>	<p>'You are aiming to adapt to online approaches rather than to replicate face-to face studio practice' (Orr, 2020) In seeking evidence of achievement, it is quite useful to ask for notebooks and evidence of <i>work in process</i> when this is produced remotely to ensure that the person submitting was the person who created it. This shift from just 'making' to 'making</p>

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<p>architectural designs, engineering models. It's often not just the artefacts themselves that are assessed but also the process by which they have been achieved, and work in progress is often central to both summative and formative assessment. In normal times assessment in situ would be the norm, but currently many are using photographic or video evidence of output but these are likely to need a reflective commentary as well as other forms of documentation of progress to give assessors confidence.</p>	<p>thinking that underpins the creative production. Documented evidence provides indicators of the standards of evidence of achievement for future students to work towards.</p>		<p>and explaining' is also invaluable in encouraging reflective approaches to creative production and revision which can demonstrate core learning outcomes</p> <p>See a range of examples in practice-based contexts https://gladhe.com/covid19, especially the video Moving Online, Creative Art and Design, Staffordshire Uni, which explicitly discusses some advantages of moving to digital submission.</p>
<p>Presentations / Performances These may be individual or group presentations/performances, usually to a live audience (other students, the public)</p>	<p>Allows candidates to demonstrate communication skills (e.g. oral, visual, physical) alongside subject mastery. Authentic: presentational (oral, visual, physical) skills</p>	<p>May be problematic to replicate the 'live audience' virtually if a synchronous approach is desired. Assessing presentations can be hugely time-consuming. May be hard to strike a</p>	<p>It's important to set and stick to time limits</p> <p>Clarity on assessment criteria is imperative so students recognise weightings of diverse assessed elements (e.g. information content, presentation techniques, ability to answer questions)</p>

Alternative assessment methods that have been used to replace on-site exams: what are they?	Advantages	Disadvantages	Points to note
<p>and not just the assessor. Assessment criteria are known in advance, and may include the ability to articulate clearly, coherently and competently the answers to reasonable questions arising from the presentation/performance.</p>	<p>often important in future employment. Peer-assessment can make presentations/performance s a better learning experience for all. Can include ability to respond to spontaneous questions from the assessor and/or the audience.</p>	<p>balance between mastery of content, and skills of presentation. 'Raising the bar': expected standards can become higher over a series of presentations/performances as assessors expect more and more. In presentations, 'impression' marks can be associated with the quality of presentation slides or resource materials used in the presentations. Where multiple assessors are involved, inter-assessor reliability can be problematic. Broadband issues may also be problematic.</p>	<p>etc.)</p> <p>As above, briefing/training and rehearsal are important to give each student a fair chance to succeed since some will have done these before and others won't. In post covid-19 days it may be more sensible to rely on recorded and submitted rather than live presentations to allow for technical issues</p> <p>Recordings and other records need to be made and kept for QA/ external examiners for any live presentations.</p>

Working in partnership with students

Arguably many of these innovative approaches can offer greater possibilities for students to contribute to the assessment design, development and quality assurance processes, which Healey *et al* (2016) for example consider offers significant benefit to both staff and students. Students we suggest can in redesigning assessment post-Covid19, potentially:

- a. Help us design briefings that are clear, meaningful and recognizably authentic, thereby helping to avoid excessive numbers of queries from students who don't understand what is required.
- b. Advise us about special difficulties students might have complying with requirements, that might not be obvious to the assessment designers.
- c. Provide feedback on formats and approaches that require technologies and applications that students may not have at home (good broadband, exclusive use of laptops, the correct software, quiet places to work etc.).
- d. Advise on the extent that feedback could be helpful on replacement assessments: in many ways many innovative approaches will have more in common with course work than traditional exams, so feedback will be more relevant.

This session's assessment design has not in all cases permitted this, but we argue that in making assessment work for the best in future scenarios, we would do well to enlist students to assist us in these and other ways.

Conclusion

We have been faced this year with a fast-moving and unpredictable context and as discussed it seems likely that we will see significant further churn before the situation is fully resolved. That things can **never be the same as formerly** is unquestionable so it is more important than ever, to design assessments that minimise stress for students, boost their sense of authenticity and reduce the temptation for potentially hard-pressed individuals to submit their assessments using any means possible (Lawrence, 2020), while at the same time making them manageable for staff, authentic, as well as reliable and valid while maintaining the assurance of standards. Ownership, voice and manageability are all key design factors which impact positively on academic integrity (Sambell et al, 2019) so tactics which avoid over-assessment are also likely to be helpful all round, with the important benefit of lightening the marking load for assessors, too.

We are continuing to think actively about how we could build on these ideas in the longer term, to make radical and substantial reconfigurations to assessment in the future, moving beyond replacing exams to other assessments. We welcome your views and feedback.

References and wider reading

Allan, S., 2020. Migration and transformation: a sociomaterial analysis of practitioners' experiences with online exams. *Research in Learning Technology*, 28.

Arnold, L (2019) Unlocking the power of authentic assessment, DLTE ARISE lecture, Edinburgh Napier University Nov 27th. Slides and recording available (ENU staff only) <https://staff.napier.ac.uk/services/dlte/Pages/DLTE-Past-Events-201920.aspx>, or slides from <https://lydiaarnold.wordpress.com/>

Arnold, L., Williams, T. and Thompson, K., 2009. Advancing the Patchwork Text: The Development of Patchwork Media Approaches. *International Journal of Learning*, 16(5).

Bjerrum Nielsen, S. (2020a) (blog) '*Preven ting Academic Misconduct in digital exams using third-party programs*' <https://uniwise.co.uk/blog/preventing-academic-misconduct-in-digital-exams-using-third-party-programs> (accessed May 2020)

Bjerrum Nielsen, S. et. al. (2020b) (blog) '*WISEcon 2019: Beyond the standard written exam*' <https://uniwise.co.uk/blog/wisecon-2019-beyond-standard-written-exam> (accessed May 2020)

Brown, S. and Race, P. 'Using effective assessment and feedback to promote learning' in Hunt, L. and Chalmers, D., 2020 (at press). *University teaching in focus: A learning-centred approach*. Routledge.

Brown, S. and Sambell, K (2020a) 'Contingency planning: exploring rapid alternatives to face to face assessment' Downloadable from <https://sally-brown.net/2020/03/13/assessment-alternatives-at-a-time-of-university-closures/> (accessed May 2020)

Brown, S. and Sambell, K (2020b) Fifty tips for replacements for time-constrained, invigilated on-site exams Downloadable from <https://sally-brown.net/2020/04/02/kay-sambell-sally-brown-coronavirus-contingency-suggestions-for-replacing-on-site-exams/> (accessed May 2020)

Buckley, A. (2020) Heriot Watt University Adapting your assessments: supporting student online learning toolkit <https://lta.hw.ac.uk/sslo-assessment/> (accessed May 2020)

Clarke, J.L. and Boud, D., 2018. Refocusing portfolio assessment: Curating for feedback and portrayal. *Innovations in education and teaching international*, 55(4), pp.479-486.

Dawson, P., Carless, D. and Lee, P (2020) Authentic feedback: supporting learners to engage in disciplinary feedback practices. *Assessment and Evaluation in HE*. DOI:10.1080/02602938.2020.1769022

D'Arcy Norma dot net (blog), March 31, 2020. 'Online Exam Proctoring'; <https://darcynorman.net/2020/03/31/online-exam-proctoring/> (accessed May 2020)

<https://www.pebblepad.co.uk/>

Ghandi, S (2016) Lessons from the coalface: supporting inclusivity. Lessons of an accidental inclusivist. Advance HE Equality and Diversity in L and T: . https://s3.eu-west-2.amazonaws.com/assets.creode.advancehe-document-manager/documents/ecu/ED-in-LT-Section-B_1573211644.pdf

Godfrey, J., (2020). *The Student Phrase Book: Vocabulary for Writing at University*. Macmillan International Higher Education.

Gordon, D. (2020) Don't Panic: the Hitchhiker's Guide to alternative online assessment. <http://www.damiantgordon.com/Guide.pdf>
HEA (2012) *A Marked Improvement: transforming assessment in higher education*, York: Higher Education Academy.
(http://www.heacademy.ac.uk/assets/documents/assessment/A_Marked_Improvement.pdf)

Healey, M., Flint, A. and Harrington, K., 2016. Students as partners: Reflections on a conceptual model. *Teaching & Learning Inquiry*, 4(2), pp.1-13.

Hendry, G. (2020) Practical assessment strategies to prevent students from plagiarising <https://www.sydney.edu.au/education-portfolio/ei/news/pdfs/Practical%20assessment%20strategies%20to%20prevent%20students%20from%20plagiarising3.pdf>

Hughes, J. and Purnell, E., 2008. Blogging for beginners? Using blogs and eportfolios in Teacher Education.

Jones-Devitt, S., Lawton, M. and Mayne, W., 2016. HEA patchwork assessment practice guide: <https://www.advance-he.ac.uk/knowledge-hub/patchwork-assessment-practice-guide>

Joughin, G. (2010) A short guide to oral assessment

http://eprints.leedsbeckett.ac.uk/2804/1/100317_36668_ShortGuideOralAssess1_WEB.pdf

JISC (2015) <https://www.jisc.ac.uk/guides/transforming-assessment-and-feedback/assessment-design>

Lawrence, Jenny. (2020) Designing out plagiarism for online assessment. <https://thesedablog.wordpress.com/2020/04/02/online-assessment/> (accessed May 2020)

Logan, D., Sotiriadou, P., Daly, A. and Guest, R., 2017, October. Interactive oral assessments: Pedagogical and policy considerations. In *E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education* (pp. 403-409). Association for the Advancement of Computing in Education (AACE).

Orr, S. (2020) private correspondence

Radclyfe Thomas, N. (2012) 'Blogging is additive' in *Increasing Student Engagement and Retention using Online Learning Activities: Wikis, Blogs and Webquests Cutting-edge Technologies in Higher Education*, Volume 6A, 75107 by Emerald Group Publishing Limited

RSA(2020) www.thersa.org

Sambell, K. Brown, S and Race, P (2019) *Combatting Contract Cheating*. DLTE Edinburgh Napier Quick Guide (#14) <https://staff.napier.ac.uk/services/dlte/Pages/QuickGuides.aspx>

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

Sotiriadou, P., Logan, D., Daly, A. and Guest, R., 2019. The role of authentic assessment to preserve academic integrity and promote skill development and employability. *Studies in Higher Education*, pp.1-17.

Villarroel, V., Boud, D., Bloxham, S., Bruna, D. and Bruna, C., 2020. Using principles of authentic assessment to redesign written examinations and tests. *Innovations in Education and Teaching International*, 57(1), pp.38-49.

Webster, H. and Crow, C. (2020) Newcastle University Writing Centre: Writing coursework under time constraints - fast and efficiently! <https://tinyurl.com/y6ch2fo4>

Webster. (2020) Writing Development Centre Newcastle University 'WDC explains it all in one slide Higher Order Thinking: Critical Analysis' <https://www.youtube.com/watch?v=dqyJVotAOdo> (accessed May 2020).

Winter, R., 2003. Contextualizing the patchwork text: addressing problems of coursework assessment in higher education. *Innovations in Education and Teaching International*, 40(2), pp.112-122.

Wood,G. (11 May 2020) Preparing students for take-home and Open Book exams <https://www.garycwood.uk/> and 19th May 2020 7
Tips for students on the day of the exam itself: <https://www.garycwood.uk/2020/05/sitting-your-take-home-and-open-book-exams.html>, University of Sheffield | Department of Mechanical Engineering.