Writing better assignments in the post-Covid19 era: approaches to good task design

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In the Spring of 2020, dramatic changes in higher education assessment were triggered by Coronavirus-19 pandemic causing the closure overnight of campuses and as a result, the abandonment of plans to run unseen, time-constrained traditional exams on site. In a positive moment (notwithstanding the grim circumstances) for assessment scholars and innovation aficionados, the hunt was on for immediate alternative ways to assess students in this academic year. University senior managers found themselves consulting with educational and learning developers, learning technologists, librarians and quality staff (possibly for the first time in years) to seek quick solutions in the emergency situation, and heroic efforts were made to put in contingency plans to save the day. We produced guides in March, April and June (see https://sally-brown.net/kay-sambell-and-sally-brown-covid-19-assessment-collection/) to help manage the situation, and these have been widely used across the globe.

Higher Education Institutions have, one way or another, got through this academic year balancing the need to assure standards with our duty of care for students' wellbeing. Looking to the next steps, as we face another highly uncertain academic year, our thinking has recently turned to building on the positive aspects of these achievements to change assessment for good, by permanently moving away from the ineffectiveness, fragility and inauthenticity of traditional exams. There have been many positive features of the alternatives put into practice during the recent online switch that could bring about lasting and helpful changes to future systems and processes, so we want to see traditional exams replaced with more fit-for-purpose assessment that builds on three decades of educational scholarship to which we have contributed significantly on **Assessment for Learning** (Boud et al 2010, HEA, 2012, Sambell et al 2013).

We argue that where traditional exams are retained, those choosing to do so should be required to justify their inclusion in a mixed diet of assessment, with better reasons for doing so than custom and practice or administrative convenience. The summer of 2020 has demonstrated their inadequacy in the UK at least through the public exams fiasco, where, because the exams could not take place, untested and invalid algorithms have been used in an attempt to moderate the marks given by their teachers with disastrous effects on the students involved and on the reputation of the government who have bungled the process, necessitating several policy U-turns.

We must not, ever, go back to old ways of doing things, which is why in this short piece, one of a suite of articles we have been producing over the summer of 2020, we propose moving strongly away from traditional exams' inflexibility towards more authentic, (Villarroel, *et al* 2018) life-relevant tasks that foster self-regulation, present high order cognitive challenges rather than measuring low order thinking skills in a decontextualised way (Villarroel et al, 2020), and place as much emphasis on process as on outcome. While these future redesigns may actually take the form of coursework assignments (which tend

to be introduced to students early on and fully explained to students with ample opportunity for learners to study appropriately and prepare) rather than being sprung on them at the last minute as with the traditional unseen exam, at the very least we should, in future, be implementing more authentic approaches to the design of any exams we do set (Villarroel et al, 2020), in order to make sure they are underpinned by more authentic principles and also more flexible to deliver remotely should the need arise. This is likely to be a progressive process:

> "Although there are differences between disciplines, memorization is not the ultimate learning goal in any subject, and memorisation ill-equips students for the complex demands of life and work they face on graduation. The achievement of deep learning may require progressively advancing towards it, incorporating memory, analysis and transfer, in different weightings, until students become familiar with the cognitive complexity required. (Villarroel et al 2020 p2)

Innovative examinations, for example open-book, in-tray and two-stage formats can promote realism, cognitive challenge and evaluative judgement, in ways that traditional unseen exams that focus on knowledge reproduction cannot, so we need to look to ways of rendering all tests authentic.

So what might work better? Consider these three alternatives to traditional exam questions. All of them signal to students that deep approaches to study are required which imply a higher quality of learning, rather than cramming and regurgitating everything they can remember, which is a tactic that many students unfortunately adopt when faced with a traditional exam (Sambell & McDowell, 1998)

Early Years Teacher Education Course

Exam question: "What approaches to struggling young readers are available to teachers, and what are the benefits and disadvantages of each?"

Alternative: Open-book case study. In your class you have a boy, Kai, from a disadvantaged background who is really struggling to get beyond sounding words out. From your experience and from your reading around the topic (which you should reference), draw up a table to help you consider the potential advantages and disbenefits of each of the following interventions to support Kai, and say how each might help him to make progress. Please also suggest one more course of action derived from your wider reading. Provide a conclusion in which you show your plan of action for the next twelve weeks and justify your choices of approach.

1. Sending home a letter to Kai's parents asking them to read with him every day for the next 12 weeks.

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2. Asking your classroom volunteer (Granny Sally) to come in for extra sessions every week for the next twelve to work intensively with Kai.

3. Make time yourself to work several times a week with Kai using flash cards to help him become very familiar with a number of targeted high-frequency words.

4. Work with the whole class over 12 weeks to learn 'the word of the day' thereby helping Kai and all the others gain confidence and familiarity with 60 new words.

Physical Education, Health and well-being

Exam question: Outline the health risks associated with an inactive lifestyle and poor diet for Type 2 diabetic older females, and describe what remedies could improve their health and well-being.

Alternative: Learning pack. As a community sports facilitator, you have been asked to support a group of older women with Type 2 diabetes who take little exercise and whose diet is less than optimum. Produce a digital learning pack targeted to help this group that might contain, for example, self-produced and collated visually attractive and clearly written fact sheets, check lists, recipes and invitations to participate in group activities. Your pack should contain at least five items and no more than eight. Provide a reflective commentary outlining your rationale for choices about what to include (max 200 words), a reference list to your scientific sources (both text and community-based) (max 300 words), a short note on how you accessed, identified and prioritised your information sources (100 words) and a statement of the extent to which your own perceptions and beliefs have altered during the course of undertaking this assignment (max 200 words)

Business and Law

Exam question: Outline the legal and professional responsibilities of a company importing children's toys and games into Hong Kong and the UK in terms of health and safety.

Alternative: Consultant's opinion. This scenario assumes you are working in a consultancy advising clients on importing and exporting goods into Hong Kong and the UK. You have been approached by a client who has discovered that one of her suppliers of children's toys and games has been found to have been using unsafe lead-based paint on some items for at least five years. Draw up a brief immediate response for your client, advising her with due caveats of the range of implications this is likely to have for her business in Hong Kong and the UK, and indicating what actions she needs to take as a matter of urgency. Provide a short report (max 800 words) including your opinion of what steps to take immediately and longer term, with an appendix that lists relevant legislation, reference material and other information to back up your advice.

There is a good chance that the quality of work that students produce as a result of being asked to do meaningful tasks like these rather than just answer exam questions will be higher, involving students being more fully engaged, taking more responsibility for their own learning and adopting deep rather than surface approaches to learning (Entwistle, 2000). Potentially, students are more likely to be able to see the relevance of what they are doing to their future lives and selves, and therefore be more likely to demonstrate thoughtfully the knowledge and capabilities contained within the specified learning outcomes. In any

case, they are likely to be less stultifyingly dull for students to undertake and for us to assess than traditional exams!

What are the downsides of taking this kind of approach?

- It's probably easier to write a quick exam question, (although there are likely to be problems in coming up with original ones year after year, with a tendency to lapse back into formulaic approaches that students can be quite successful at predicting).
- The scenarios may be harder to draft, (although it is probable that someone familiar with the courses being taught would be able to put these together quite efficiently, ideally in conjunction with colleagues and potentially with inputs from students themselves).
- Some staff may find it challenging to create these multi-faceted questions if they are unfamiliar with this approach. In response to this, we offer you the following handy little task generator to help you think through what you might want to ask students to do within a specific context.

In order to help with the latter, we have come up with an approach that might be helpful. Whenever writing assignments, it's a good idea to start with the learning outcomes, (see Chapter 3 in Brown, 2015) and if they are well written, they are likely to contain one or more powerful, driving verbs at their centre to direct student effort, such as 'interpret', 'research and review', 'set up and calibrate', 'evaluate' and 'compile'. This is then followed by the object of the verb i.e. what you do and next the outcome/evidence of achievement. You can see what this might look like below:

Verb/educational outcomes	What? i.e. object	Outcome/evidence of achievement
Interpret	A range of complex and at times incomplete financial and other data.	Compile a meaningful summary leading to a forward action plan.
Research and review	Information from a variety of sources including press releases, statistics from national agencies, focus groups and advisory boards and others.	Produce an accessible executive summary of the key findings in the form of two sides of A4.
Familiarise yourself with technical set up and calibration	Specialist equipment appropriately.	Draw up a quick guide for peers who will be using the equipment.
Evaluate	Three proposed solutions to a complex issue.	Formulate a further two of your own with suggestions as to what might work best, and why.

Compile	Contingency plans for use in a professional environment.	Produce disaster recovery in case of a serious emergency leading to mitigations and remediation.

You will then need to add the context relevant to your subject area and some context-specific modifiers/developments/range statements as in these examples:

Context relevant to your subject area	Verb/educational outcomes	What? i.e. object	Outcome/evidence of achievement	Modifiers/developments/ range statements (context specific)
You are working for a social enterprise which is struggling to maintain momentum during the Corona19 crisis.	Interpret	A range of complex and at times incomplete financial and other data.	Compile a meaningful summary leading to a forward action plan	That will give your funders confidence in your abilities to remain viable
You work as an advisor for a political think tank devising policy for ministers.	Research and review	Information from a variety of sources including press releases, statistics from national agencies, focus groups and advisory boards and others.	Produce an accessible executive summary of the key findings in the form of two sides of A4	For your minister and the team supporting them.
The lab where you work has taken delivery of a new microscope	Familiarise yourself with technical set up and calibration.	Specialist equipment appropriately	Draw up a quick guide for peers who will be using the equipment	to enable them to use it independently, safely and appropriately.
You are working with a business that owns, lets and services commercial	Evaluate	Three proposed solutions to a complex issue	Formulate a further two of your own with suggestions as to	That will enable your company to decide about new acquisitions and divesting of assets.

				what might work best, and why	
premises in the city centre.			what might work best, and why	
You are a hydrologist working for a regional development agency with responsibility for a substantial river basin.	Compile	Contingency plans for use in a professional environment.	Produce disaster recovery in case of a serious emergency leading to mitigations and remediation.	In the event of a serious flooding incident that affects more than 50% of your area.

But because the central verbs, objects and outcomes / evidence of achievement are likely to be applicable and relevant to lots of contexts, they are usable in more than one, as in this worked example using the first set of verbs/educational outcomes, objects and evidence of achievement:

Context relevant to your subject area	Verb/educational outcomes	What? i.e. object	Outcome/evidence of achievement	Modifiers/developments / range statements (context specific)
You are working for a social enterprise which is struggling to maintain momentum during the Corona19 crisis.				That will give your funders confidence in your abilities to remain viable.
You are a ward manager at a busy hospital, where your ward is being repurposed to deal with a national emergency and you've been asked to identify what you need to make this happen (including staffing, budget and equipment).	Interpret	A range of complex and at times incomplete financial and other data	Compile a meaningful summary leading to a forward action plan	That will enable you to operationalise this plan within a 48-hour period.
You work at an advertising agency where you are				That will propose how your company can best get its message across both to

responsible for a new campaign to promote a new ecological household product that will challenge current market leaders in detergents for the home				consumers and to the retailers you aim to incentivise to stock your products.

This isn't designed to be a random bingo-style task generator but is proposed as a means to unlock potential for assessment designers to be more creative in designing alternative tasks. We wouldn't want to argue that this is a formula that will work in every context on every occasion, but rather to suggest that designing assignments doesn't have to be hugely demanding and taxing if it is tackled systematically and thoughtfully (and ideally, collectively).

So here are a few more variables you could play with, adapting them to your own disciplines and contexts:

Verb/educational outcomes	What? i.e. object	Outcome/evidence of achievement
Articulate	the central aspects of a problem	a case study, offering a variety of reasoned solutions, with a rationale for each and a personalised recommendation
Argue	For a particular solution based on a range of complex contextual factors a reasoned rationale for this choice.	an executive summary with appendices.
Formulate	Your plans for project planning and management in a highly time-constrained environment where all tasks appear equally urgent.	A prioritised action plan with milestones of achievement and measurable indicators of success.
Synthesise	synopses of multiple and diverse sources including text, image and data which can explain a	Press releases suitable for both (a) tabloid and (b) 'long read' newspaper journalists.

	particular phenomenon discussed within a programme	
Critique	three perspectives on or readings of an identified text, choosing one that is most convincing to you and giving your reasons for this choice.	A presentation for a specialist conference in your field.
Provide	A rationale for a course of action taken in a professional setting, illustrating this with appropriate, relevant and current formal and informal publications.	An email (no more than 1,000 words plus refences and hyperlinks) to your manager who has asked you to provide evidence-based justification for your planned course of action.
Research	An area of innovation, and argue for its uptake, drawing conclusions from your sources of information for the likelihood of the initiative's success.	A five-minute pitch to a prospective funder who is reviewing your proposal in competition with several others.

Inevitably, you will find these wanting to some extent to match your own precise needs, so feel free to adapt, amend, rewrite and reshape the methodology to your local needs (and get in touch to share with us if you do so).

Diverse forms of evidence of achievement

In terms of evidence of outcome, there are myriad means by which you can ask your students to evidence their achievements you could ask for which include, *inter alia,*: in-class presentations, portfolios, logbooks or assessed notebooks, viva voce exams/ orals, assessed seminar and group discussion records (video or audio), lab work reports, conference posters, checklists, narrated PowerPoint presentations, reflective commentaries/accounts, critical incident accounts, mind maps, flow charts, electronic and hard-copy portfolios, teaching packs, information display materials, projects, case studies, annotated bibliographies, mind maps, sketch notes, story-boards, articles or chapters for publication, artefacts and, of course, formal and short reports.

In Brown and Race, (2020) there is a table showing the advantages and disadvantages of many of these and in Sambell and Brown (2020c) we explore alternatives further in a post-Covid 19 context.

Your choice from among these and others that come to mind in your local environments will depend on the context, the discipline, the level of study and most importantly, your

purposes in assessing students on this occasion. Choose what outputs work best for you, aiming to make the assignment format fit your aims.

Conclusions

It would be a terrible waste of all the efforts that have been made in 2020 if we simply reverted to bad old ways of assessing university students, particularly since evidence-led scholarship assures us there are many more authentic ways of doing it, and we shouldn't do it. While some believe that designing assignments that challenge students to move away from formulaic, recollection-driven exam responses towards more authentic assessable outputs is readily achievable if a systematic and strategic approach is taken to their formulation. The approach suggested here is no universal panacea, but may be helpful to those who wish to move in this direction and, as always collaborative approaches often work better than individual heroic struggles, so it's a good idea to tackle this in teams. It's also a good idea to seek feedback from some students – maybe those who have formerly had experience of studying the subject area of your assessment tasks redesigns – as they will be well placed to advise you of any potential problems you haven't spotted. We're very happy for this paper to be used for a trigger for workshops led by educational developers and curriculum designers (it's designed so that the tables can be extracted and used this way) and would love to hear how colleagues get on if they use it. Do get in touch!

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