

PART 1 March 2021

A compendium of examples of authentic assessment in practice from diverse discipline

Sally Brown and Kay Sambell 19th March 2021

In our paper 'Writing better assignments in the Post-Covid19 era: approaches to good task design', <https://sally-brown.net/kay-sambell-and-sally-brown-covid-19-assessment-collection/> published 17th August 2020 as part of the Covid Collection on our websites, we outline our systematic approach to building more authentic assignments that align fully with learning outcomes and engage students in meaningful and productive activities.

This handout is designed to demonstrate what we mean when we propose in that paper **Six steps** towards designing more authentic assessment by using six components: **Context, Learning outcomes, Verbs, Object, Outcomes/ Evidence of achievement, Modifiers/ developments.**

Rationale

- Whenever writing assignments, it's a good idea to start with the **learning outcomes**, 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 which provides a focus for action, e.g. produce a digital learning pack, or provide a professional opinion in the form of a letter with appendices;
- Next indicate what **outcomes/evidence of achievement** you would need so you could be confident the outcome has been achieved;
- Preface these steps with detail around the **subject or professional context** relevant to the subject area/ discipline/ course to bring the assignment to life;
- Complete it with modifiers/developments/ range statements to guide the students.

What follows next is a compendium of lightly fictionalised subject specific examples to illustrate how this can work in practice in a number of different disciplines. We are grateful to all the National Teaching Fellows and others who have helped us compile this collection which is likely to evolve and grow over time. If you have ideas you would like to see included in a subsequent edition of this compendium, please contact s.brown@leedsbeckett.ac.uk or kay.sambell@cumbria.ac.uk

Sixteen examples follow in the twelve areas listed below:

1. Counselling
2. Nursing
3. Health and Social Care
4. Policing
5. Psychology
6. Social work
7. Pharmacy
8. Film studies
9. Biosciences
10. Area studies
11. Sexual health
12. Civil Engineering

1. Counselling

This fictional example is adapted from ideas provided by NTF Nicki Martin of London South Bank University.

Traditional essay example (3,500 words)

What are the benefits and limits of CBT sessions for bereaved clients? Outline what you would regard as minimum levels of support for a client with complicated grief issues, and suggest what other options are available for clients in great distress within the NHS and beyond.

Authentic alternative assessment

Context

You are recently qualified and working in an NHS setting. You are responsible for your ongoing CPD and accessing regular supervision. A client has been assigned to you for 6 sessions of CBT in the first instance. The information you have is that she lost her 25-year-old son to cancer four years previously. He was an identical twin. She has been referred by her GP because she is not sleeping. In the first session you used the term 'complicated grief'. The client became angry and said, in what felt like a sarcastic tone, 'there is nothing complicated about my grief, my child is dead, I have a broken heart'. She seemed disparaging and disconnected throughout the session but said she would come back next week because nobody had offered her anything else.

1. Putting yourself in the place of a newly qualified counsellor and mindful of the ethical requirement to work within your competence, **draft a short note** (up to 500 words) for your **reflective diary** considering whether you feel equipped by your training to work with this client. Give reasons for your answers.
2. **Draft a rationale for your line manager** indicating whether the six sessions of CBT you are normally allowed is likely to be an appropriate initial treatment for this client and outlining what you might hope to achieve in these six sessions. (up to 500 words).
3. **Write a note for your reflective diary** outlining what sort of counselling do you think might be most helpful for this client if money was no object, and why would you recommend this approach. (up to 500 words).
4. Your client has emailed back after the meeting, saying her grandma has offered to pay for some extra help for her. **Draft an email reply to your client** suggesting where you might signpost her for additional support, and indicating on what basis you are confident about the services you recommend. (up to 500 words).
5. **Write a note for your reflective diary** about how this situation is likely to impact on you emotionally, and how would you make use of supervision to look after yourself in this situation. (up to 500 words).
6. Thinking about your own CPD needs in relation to working with a client with this sort of presenting issue, **suggest two elements of additional training needs** you might have to support your work (give contact info/ websites, names of organisations) and indicate three texts (online or hard copy) you could read which could be helpful to you.

2. Nursing

This is a fictional example adapted from ideas provided by Associate Professor Dr Liz Adamson of Napier University.

Caring for older people

Learning outcomes for the whole module:

- Examine the relationship between the ageing population and the health care priorities within nursing practice today.
- Evaluate evidence-base for the assessment, planning and evaluation of holistic and compassionate care for older adults and their families.
- Evaluate the concept of healthy ageing and the national and international strategies for health promotion.
- Critically explore the effectiveness of nursing theories and approaches to working with older people who have complex needs.

Traditional assignment: essay: *Examine the theoretical and legislative perspective of positive approaches to nursing care that support older people, making use of a case study to demonstrate the application of this knowledge. (2,500 words).*

Authentic alternative assignment

Learning outcomes

- Analyse digital stories depicting older people's experience of health care;
- Interpret the complex evidence associated with care of older people;
- Identify the key elements of care practice most important to older people;
- Compile a holistic and compassionate plan of care for older adults and their families.

Context:

You are working in acute medicine and 70-year-old woman with a diagnosis of diabetes mellites has been admitted to the ward for assessment following an episode of dizziness and a fall at home. Her blood glucose is stabilised. She has been prescribed a course of antibiotics for a urinary infection and is due for discharge home. You have been asked to create an anticipatory care plan with the patient and her daughter.

Tasks:

1. Prepare a list of references (including at least 2 journal articles or book chapters, at least 2 websites containing digital stories and at least 3 informal sources such as leaflets, posters or blogs to provide an evidence base from which you can draw information about diabetes mellites in older women).
2. Write a 200 word reflection on how you sourced this information, how you made your selection, and, choosing one item from your list from which you learned most, critically evaluate the information contained in it and say why you found that particular item so useful.
3. Draft an account in written text or diagrammatical form depicting the key elements of care practice which matter to older people, which you have identified while out on practice (this will be used in (potentially virtual) class for discussion and involve formative assessment from the tutor and peers).

4. Work with peers on the VLE to contribute collectively to a group digital mural of images and text depicting health care priorities that are likely to matter most to older people based on your research evidence and the real-life care accounts you have encountered.
5. Produce a holistic and compassionate anticipatory care plan for this patient to be provided to her on discharge from acute care, accompanied by a written or recorded rationale (300 words or 3 minutes of audio) to justify the care intervention included in your plan.

3. Health and Social care

3.1. Traditional exam/ essay question: “In designing a range of support at your local hospice, what interventions would you propose for (a) elderly end of life patients, and (b) under twenties who have contracted terminal cancer.”

Authentic assessment example:

The context

Envisage that you are working on placement in a local voluntarily supported hospice and you have been asked to introduce some enhancements for terminal and cancer patients both elderly and under-20s. Finance is normally heavily constrained but in this case the hospice is in receipt of a substantial legacy (around £20,000) from a grateful former patient who specifically indicated that she would like the money to be spent on equipment, services, goods or artefacts to make life more pleasant for residents long-term.

Tasks

1. **Research** what kinds of enhancement are available in hospices in your area to support the wellbeing of patients as they approach the ends of their lives.
2. **Prepare** a costed budget for three enhancements, one specifically for older patients, one for younger patients and one from which both groups would be likely to benefit, bearing in mind that any capital expenditure would need to have an amount budgeted for maintenance and upkeep for at least 5 years;
3. **Outline** what you think would be the principal benefits of the enhancements you are proposing, and any problems or pitfalls you could envisage with their purchase.
4. **Provide a rationale** for the recommendations you are making.
5. In your **reflective** diary, note what insights have you developed from undertaking this assignment that you can carry forward into your future professional life, and into your own feelings as a student on the Health and Social care course.

3.2 Thanks to Thomas Broderick, Munster Technological University for providing this example.

Traditional exam/essay question: “In designing a range of supports at your residential home for persons with a disability, what health initiatives would you propose for the service user in the following areas: physical wellness, social wellness and occupational/vocational wellness?”

Alternative assessment

Context

Envisage that you are working on placement in a local residential home with persons with disability and considering the impacts of Covid, you have been asked to introduce some new health initiatives to support residents in their overall wellness.

Tasks:

1. **Research** what the wellness needs of service-users are and what kinds of health initiatives are most appropriate to support their wellness at this time. Present this as a set of up to ten bullet points, with a list on one side of A4 of your references (texts, leaflets, websites etc).
2. **Prepare** a plan to implement three health initiatives, one each to support physical, social and occupational/vocational needs of the service user. (one side of A4 for each initiative).
3. **Present** in the form of a table what you think are the principal benefits of the initiatives you are proposing, and any problems or pitfalls you could envisage in implementing each of these.
4. **Provide** a rationale for the recommendations you are making written in the form of an email for your busy line manager.
5. In your reflective diary, **comment** on what you have most learned from this assignment and **note** what insights you have developed from undertaking this assignment that you can carry forward into your future working life.

4. Policing

This is a fictional example drafted to demonstrate the authentic assessment design methodology.

Traditional exam question:

Outline what kinds of preparations you would need to make prior to undertaking a forced entry on a number of private properties when investigating drug dealing, providing the legal background for such an operation on what is and is not recognised as legitimate action.

Authentic assessment example:

Scenario

Extract from the Newcastle Chronicle, October 2020

SUSPECTED drugs' barons have been arrested in a series of dawn raids across Tyneside.

Police today smashed their way into nine properties across Newcastle and North Tyneside in an operation aimed at disrupting the deadly dealers that blight our communities. Nine people were arrested during the simultaneous early morning strikes, and a tenth was taken in for questioning this afternoon. They are all suspected of being involved in the large-scale supply of illegal drugs. Arrests took place at Wilton Avenue, Morton Street and Burwood Road in Walker, Cleadon Street in Byker, and Langdale Close and Bishoprock Drive in Longbenton. Searches are today also taking place at properties on Allendale Road in Byker, Elizabeth Drive in Forest Hall and Maybury Villas in Longbenton.

Envisage that you are the officer in charge of leading the raid in Forest Hall, a leafy residential suburban area. Knowing the context, the plan is to attend with armed police and to remove the front door of the house you are raiding with chain saws at 6 a.m.

Task:

- Draft an outline plan of action for the raid, indicating how many officers and vehicles you will need to have attending, what precautions you would have to prevent escape and what contingency plans you would put in place to ensure this is a successful operation.
- One of your staff has recently joined your team and is fairly inexperienced. Draft a short note (no more than 2 sides of A4) for her summarising the relevant laws that need to be taken into account to ensure that the action taken is both lawful and as safe for all stakeholders as possible. Provide the list of legal frameworks as an appendix.
- Make a list of the key equipment you will need to ensure what you are likely to need is available for the action.
- Write a brief note for your reflective diary about what you have learned from preparing for this assignment. For you to take forward into your future career.

5. Psychology

This is a fictional example adapted from ideas provided by NTF Julie Hulme.

Traditional exam question for first year psychology students:

“Discuss the ways in which inter-group conflict can arise and be reduced within a community using social psychological theories.”

Authentic assessment Case study:

Context

“You are working with a local housing association, and your job is to try to create a sense of community in a small new social housing development in Stoke-on-Trent. The community is home to diverse people, including single people, families, young and old, from lots of different ethnic backgrounds and cultures. In general, everyone has started to settle in well, but you have noticed that there are some tensions arising between the younger residents (mostly care leavers aged 16 to 25) and the older residents (retired people who are mostly over the age of 60). Some younger residents complain that the older residents are nousey, always wanting to know what they're doing, while some older residents complain that the younger residents are always rushing about and can be noisy”.

Tasks

- Use your understanding of social psychological theories studied in this module to write a short account to explain why this problem might have arisen (500 words).
- Propose one way in which you could help to resolve the conflict and help to restore community relations (500 words).
- These two elements should be presented in the form of a report that will be useful for other staff at the housing association.
- Provide an annotated reference list, which shows the main sources you used to find the information, and gives a concise summary of the key message from one paper or book

chapter that was important to writing your report (full reference list in APA format plus up to 500 words description for your main sources).

- Write a short personal reflection (300-500 words) in which you outline what you have learned about resolving intergroup conflict, and how this might influence your current and future practice.

6. Social Work

This is a fictional example created to illustrate the authentic assessment design process. Thanks to Jill Davey of Edinburgh Napier University for her advice in creating this example.

Traditional exam/ essay question: “What resources and support can kinship carers expect from the state and other sources, and how can they go about accessing them?”

Authentic assessment example:

Context

As a social worker you are trying to make arrangements for 12-year-old Kari whose mum, a single parent, has been arrested for a drug-related offence. She has spent the night with her Nana, Pauline, who is not well suited with the arrangement but thinks looking after Kari is the best of some not-very-good alternatives. Kari’s mum has never told anyone, not even Pauline, who Kari’s father is. Kari is in rather a bad way, having witnessed her mum’s arrest in the middle of the night and having been removed by the police from her home to go to Pauline’s. It’s your job to sort out arrangements.

Tasks

1. **Research** what support is available to Kari and Pauline in relation to kinship care legislation, policy and practice. Provide a bibliography of your sources and say which of these you found most useful.
2. **Prepare** a 2-page guide for Pauline summarising this information in a very accessible way that is easily understandable and doesn’t over-promise.
3. **Prepare** your notes for a face-to-face conversation with Kari with your thoughts about not only what help she can be offered but also how you will manage the situation.
4. In your **reflective** diary, note what new practical insights have you developed from undertaking this assignment that you can carry forward into your future professional life, and into your own feelings as a trainee social worker.

7. Pharmacy

These are fictional examples adapted from ideas provided by NTF Lezley-Anne Hanna at Queen’s University Belfast.

7.1 Exam/essay question

What advice on health risks, advance precautions and other matters would you provide for a 19-year-old patient travelling on holiday to the Solomon Islands?

Authentic assessment alternative

Introduction

Mika Ling (aged 17 years) is hoping to go to the Solomon Islands for a 14-day holiday on 24th November 2022. He is flying there (2 connecting flights from UK) and staying in a lovely 4* hotel. He asks for your advice about travel health risks including malaria and also wants to know whether he

should get any vaccinations in advance of travelling. He has no past or current medical conditions and no known allergies. He currently takes loratadine because he thinks he is allergic to his new cat.

Task

- Review the information about health risks for the Solomon Islands from the Travel Health Pro website.
- Provide for Mika written information in the form of no more than 2-sides of A4 paper in language suitable for a layperson about whether malaria prophylaxis and vaccinations are required.
- Include specific details about the chemoprophylaxis regimen(s) and the vaccinations which are needed (given Mika's medical history and length of holiday).
- Review for Mika information about malaria chemoprophylaxis from the BNF and electronic Medicines Compendium (eMC) to determine their suitability for him.
- Advise him whether there are other health risks associated with the Solomon Islands that Mika should be aware of, and note down two examples of effective bite-avoidance measures.
- Submit as a separate sheet a full list of the websites and text-based references you have used.

7.2 Exam/essay question

What factors do you need to take into account when setting up domiciliary oxygen in a patient's home to ensure it is correctly set up and usable?

Authentic assessment alternative

Introduction

You provide domiciliary oxygen as part of your community pharmacy services provision but lately have noticed that very few members of the pharmacy team and locums are prepared to get involved. After holding a team briefing about the issue, you establish that they lack confidence setting up the oxygen cylinder in the patient's home and are worried about the serious consequences of incorrect set up of this gas.

Task

- Prepare a step-by-step handy guide for the pharmacy team outlining the key steps to set up (of the cylinder and head-set) to enable everyone to have a standardized and safe approach in the form of a hard-copy booklet.
- Using the same information, produce an illustrated PowerPoint presentation (no more than 20 slides, the last of which should be your references and sources in an appropriate format) that you would use to run a 30-minute training event with your colleagues.
- Produce a mock-up of an A4 card to be handed to patients after set up, of ten top tips for using the oxygen equipment safely.

7.3 Exam/essay question

Outline the benefits and disadvantages of St John's Wort as an over-the-counter remedy.

Authentic assessment alternative

Introduction

A 25-year-old woman comes into the pharmacy to potentially buy St John's Wort. On questioning, you establish she feels down, has no real interest in things, is finding it difficult to concentrate, and lacks energy. Furthermore, she takes a combined oral contraceptive (Lucette®) and uses topical benzoyl peroxide for mild acne.

Task

- Evaluate the information provided in this scenario.
- Investigate available evidence relating to St John's Wort and provide a short technical summary. Cite your web and text-based sources.
- Determine and note whether potential interactions exist with concomitant use of St John's wort alongside her medication (and the likely outcome).
- Prepare your advice in the form of bullet points in accessible language to which you can refer in your conversation.
- Make a written consultation record about any potential interactions and include other appropriate information that you would provide about purchasing St John's Wort to treat her symptoms.
- Provide two additional non-pharmacological suggestions that may be helpful to her.

8. Film studies

8.1 Create your own film festival.

This is a fictional example adapted from ideas provided by NTF Eylem Atakav and Dr Rayna Denison UEA for a first assignment on a 'Beyond National Cinema' module on the MA Film Studies Degree.

Context

In this post-pandemic era, your task is to create your own virtual film festival using a wide range of international films. After three weeks working together, you will be asked in your group to present your work to all five fellow groups from your cohort on the BA Film and TV production.

Learning outcomes

By the end of this module you will be able to demonstrate you can, as a team:

- Select, sift and synthesise a wide range of materials relevant to the study of cinema in intra- and supra-national categories;
- Create nuanced arguments about the place of cinemas within political, gendered, economic and industrial contexts;
- Generate analysis about the status of film as it moves within and between specific cultural contexts.

Tasks showing verbs and *their objects*

1. Investigate the *global ramifications of categorising films*, with particular focus on the political ideological strategies and systems that often underpin these decisions;
2. Develop a *broad and original vision of film's distribution and consumption* within a set of global markets;
3. Draw on a *wide range of case studies from around the world* to introduce students to comparative historical examples of film production, and the different categories of films that have emerged out of them;
4. Select and present *the films you will show in your film festival*.

Indicative evidence of achievement showing *modifiers/developments*

Building on your proposal slides, this **30-min** presentation should represent the near-completed version of your hypothetical film festival. The **presentation duties should be equally divided, with everyone doing the same amount of speaking**. The presentation should include at least:

- A Title slide outlining your chosen group theme and group members' names;
- A justification of your rationale in making these choices presented **in the form of a pitch for the festival**; (group mark, 30 marks).
- A slide outlining the aims and objectives of your festival, **emphasising its unique features**; (group mark, 20 marks).
- A PowerPoint slide **outlining and commenting on each individual film under consideration** (two for each student in your group), including evidence of your **academic scholarship** to support the film's inclusion in the festival; (individual mark for each student, 30 marks per person).
- A full list of films used in the project showing the **academic references you have used in Harvard**.

8.2 Adapted from ideas supplied by NTF Pratap Rughani, University of the Arts, London

Essay question to be replaced:

Examine how activist and campaigning film and video has found public space on the internet. Has it changed the way in which we experience the politics of documentary? Illustrate with TWO or THREE examples.

More interesting authentic assignment

Course: Documentary film making Masters

Context: an early task on the Masters programme aimed to foster appropriate learning strategies for a very mixed cohort of students.

Task: prepare a dossier demonstrating the outcomes of your research into contemporary activist and campaigning film from your research on the internet

1. Identify and watch two examples of campaigning film and video online [from different political perspectives].
2. Explain what search methods you used and how you selected these particular two from the many out there (100 words).
3. Evaluate the effectiveness of each as campaigning/ activist films, demonstrating that you can separate your own judgments from your personal opinions.
4. Summarise this evaluation in the form of a 300-word blog post as if for the International Documentary Association blogsite at <https://www.documentary.org/blog>.
5. Research the style, tone and format of the BFI Sight and Sound professional journal.
6. Write a 600-word review as if for submission to this journal.
7. Write a short reflection on how your own personal learning has developed from undertaking this assignment. (200 words).

9. Biosciences

This is a fictional example adapted from ideas provided by NTF David Smith and Nikki Jordan-Mahy at Sheffield Hallam University.

Traditional exam question:

Outline the principal physiological changes that a subject deprived of water in a hot climate would experience, describing the effect of dehydration on the body, and how the homeostatic mechanisms of the body would try to retain water and regulate body temperature in a hot climate.

Authentic assessment example:

Context



52-year-old Amanda Barnes* went missing for 2 weeks in the Australian Outback near Alice Springs. She and her friends 46-year-old Dana Bainbridge and 40-year-old Jen Wah were on an afternoon four-wheel drive across the outback headed toward Stuarts Well, south of Alice Springs. During the drive, their car got bogged down in mud and could not move. Amanda stayed with the car whilst the others walked to try and get some help. Left alone with the car in the isolated outback, Amanda dug a hole underneath the car to provide shelter during the scorching daytime temperature of 40°C, and slept in the vehicle at night when the temperature dropped to 25°C.

Amanda had limited food and drink. Initially, she drank 2 litres of bottled water left in the car, but when she ran out, she drank dirty water collected from puddles, which she purified by boiling and filtering it through a T-shirt. The only food she had was two packs of biscuits and some dry noodles. After 10 days when supplies had ran out, Amanda left the car and set out to find shelter and water, leaving a note in the vehicle. After wandering for several days in the outback she eventually stumbled across a cattle drinking hole, where she was later found by police and airlifted to hospital suffering the effects of dehydration, heat exhaustion and starvation. Her two friends still have not been found. (*all names are fictionalised, although this has been based on a real case).

Task:

- Prepare a literature review including a list of at least 3 websites, two journal articles and 1 other data source you would use to inform yourself about this kind of context.
- Provide a short commentary (200 words) in which you explain how you accessed and prioritised the reference sources to which you have referred.
- Evaluate the information that has been provided in this scenario in the form of a note for your files, explaining the physiological changes that Amanda would have experienced during her ordeal, the effect of dehydration on the body, and how the homeostatic mechanisms of the body would try to retain water and the regulation of body temperature in a hot climate such as that found in the outback, and what happens in heat exhaustion (up to 1500 words).
- Using what you have learned in this exercise, draft an advice leaflet for travellers setting out on such a journey, containing advice on staying safe and what they should ensure they have in the way of equipment and supplies before setting off.

10. Area studies:

This is a fictional example adapted from ideas provided by NTF John Bostock at Edge Hill University.

Traditional exam question:

Read carefully the following 1000-word extract from a Japanese newspaper about the Bullet Train and reduce it to a third of its original length ensuring you identify its key points. (You have 30 minutes in exam conditions).

Authentic assessment assignment

Context

As a keen enthusiast of Japanese trains and as curator of cultural information, you have taken an interest in the Bullet Train.

- Research the history and impact on Japanese society of the Bullet Train, and provide a reference list of the virtual and published resources you have consulted to inform your thinking (up to two sides of A4).
- Produce a digital Learning Pack for use by the public which contains a selection of visually attractive attributed or copyright free photos (including perhaps your own) with key information pages, including, for example, suggestions for further reading, articles from the press and media and other relevant resources together with notes which clearly and concisely outline your view of the impact within and beyond Japan of the Bullet Train, with comments on its popularity and what it tells you about Japanese society.
- Write a supporting reflective blog about your choice of the source materials and the conclusions you have drawn.

11. Sexual Health

Examples

These are fictional examples adapted from ideas provided by NTF Prof David Evans (OBE), University of Greenwich, to align with the following learning outcomes:

On successful completion of this module, a student will be able to:

1. Critically develop their academic presentation skills, enabling them to share their learning with others.
2. Be creative in disseminating elements of their research or studies, as an act of performance, to an audience of professional / academic peers.
3. Innovate, through creatively utilising a range of media, to disseminate their work for wider audience consideration.
4. Extend boundaries of learning, knowledge or practice – challenging perceived wisdom and examining new ways of thinking and conceptualising.

Traditional Essay question

“Outline the role of the School Nurse in helping to reduce unplanned conceptions in a school with high levels of deprivation and poor sex education.”

Authentic assessment alternative

Introduction

You are working in a large multicultural Academy school as a School Nurse, and one of your school's particular targets is to reduce the number of young women who interrupt their education because of pregnancy. Prepare a range of resources to support your work which should comprise:

1. A broad-based literature search to underpin your resource production, which should include not just books and journal articles but also less-formal sources including websites, leaflets, posters, YouTube videos and other items on which you can draw for creating your own packs. You could among other systems use Research gate, Scopus, Google Scholar; Research Professional and other relevant academic domains in your research, and you should note which of these you found most useful (submit your list of resources and up to 300 words of comment on how you located and prioritised them).
2. A review of the five most useful items you have included in your literature review, and at least one item you regard as less than useful, providing a rationale for your choices (up to 300 words).
3. A PowerPoint or Prezi presentation to support a 30 minute in-school workshop you could run with children at one chosen level within the school (Year 7, 8, 9, 10 or 11). If using PowerPoint, you should not prepare more than 15 slides in total and you should follow the guidelines provided at [link](#) (*local link not provided in this example*) on accessible resource production.
4. A note of how you might modify this presentation for a different age group (up to 300 words).
5. A set of 'dos and don'ts' (no more than 10 of each) or up to 20 tips for a junior colleague on what needs to be considered in such a presentation.
6. Write a short reflective commentary on how your research has underpinned this assignment and the work associated with the production of these resources has illuminated your own professional practice. (up to 300 words).

12. Civil Engineering

This is a fictionalised example based on ideas contributed by Associate Professor (Engineering Education) and Director, Center for Engineering Education Innovation (E2I), Hong Kong University of Science and Technology, Ben Y. B. Chan.

Typical traditional Exam/essay question

Identify five serious contingencies that could occur on site over a period of construction, and identify the main actions that would need to be taken in response to these incidents which would need to be undertaken by the Civil Engineer to prevent and mitigate disaster.

Authentic assessment alternative

A scenario is provided establishing the context for the assignment, and over the course of a 24-hour period, students are required to respond in real time to emails received from the tutor which require prompt and informed decision making.

Introduction

As final year degree students at HKUST as your capstone assignment integrating learning from different elements of your programme, you will be asked to work in a team to set up a simulated consultancy company, advising the management of a substantial building project in Hong Kong on construction management issues. During the course of the activity, you will be asked to respond to a changing context with timely and accurate advice, based on what you have learned here at HKUST, to demonstrate your capabilities to cope with crisis situations requiring immediate action.

Tasks:

1. To be submitted two days before the assignment day: “As a team, *review* likely problematic occurrences that could occur on the building site we have been studying this year and *produce a short summary of risks, together with feasible mitigations*. This should include reference to appropriate sources including at least two journal articles”.
2. Email 1 from tutor: “In response to weather reports forecasting that a typhoon will be experienced in the locality within the next 24 hours, *draw up* an immediate **plan of action** for precautions to be taken to secure the site and minimise damage to works and personnel. These should be submitted two hours from receipt of this email.”
3. Email 2: “Police have advised that storm damage has resulted in land slippage as shown on the enclosed diagrams: in your team you are required to *develop and submit* within the hour **a costed plan to alleviate the damage immediately**”.
4. Within 10 hours, *submit* an **incident report** outlining causes for the landslip plus and *make recommendations* for avoidance of any similar events on this or other sites in the future.

PART 2 May 2021

Authentic assessment compendium: Episode Two – the saga continues!

Sally Brown and Kay Sambell

Introduction

Following the positive reception of our **compendium of examples of authentic assessment in practice from diverse disciplines within our Covid Assessment Collection posted on March 19th 2021** at <https://sally-brown.net/kay-sambell-and-sally-brown-covid-19-assessment-collection/> we have been gratified to receive some marvellous additional examples of using our approach published on 17th August as ‘**Writing better assignments in the Post-Covid19 era: approaches to good task design**’ which we present here.

This compendium contains:

1. **Four examples from Sunderland University on Childhood studies**
2. **Four examples from Bangor University on Counselling skills, Clinical Psychology, Haematology and Marine Geoscience**
3. **Three examples from Galway-Mayo Institute of Technology on Biopharmaceutical Science**
4. **Two examples from De Montfort University on Biochemistry and Education**
5. **One example from Huddersfield University on Electrical and Electronic Engineering**
6. **One example from Kay and me from the English Domain**

These examples are followed by some examples that don’t follow our particular format, but have been sent to us as examples of good authentic assessment practice from Leicester University (Biosciences) Wolverhampton University (Musical Theatre), De Montfort University (Advanced Financial Reporting) and Heriot Watt University (Mathematics).

To recap, we contend that creating authentic assessment tasks doesn't have to be hugely time-consuming or demanding if our approach is followed. To recap, the 'Six steps towards designing more authentic assessment' comprises using six components: Context, Learning outcomes, Verbs, Object, Outcomes/ Evidence of achievement, Modifiers/ developments and building the assignments round them.

Rationale

- Whenever writing assignments, it's a good idea to start with the **learning outcomes**, 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 which provides a focus for action, e.g. produce a digital learning pack, or provide a professional opinion in the form of a letter with appendices;
- Next indicate what **outcomes/evidence of achievement** you would need so you could be confident the outcome has been achieved;
- Preface these steps with detail around the **subject or professional context** relevant to the subject area/ discipline/ course to bring the assignment to life;
- Complete it with modifiers/developments/ range statements to guide the students.

Thanks to everyone who has contributed these and thanks also to the institutional colleagues who collected them for us from the Universities of Sunderland, Bangor, Heriot Watt University, Huddersfield, De Montfort and Leicester. These are presented unedited as provided by the authors/collectors. We've also added a couple of examples of our own.

Disciplines covered in the compendium include Childhood Studies, Counselling, Clinical Psychology, Haematology, Marine Geoscience, Biopharmaceutical science, Biochemistry, Education, Engineering and English.

The additional resources are from the domains of Musical Theatre and Maths.

First of all, here are four examples of authentic assessment in Childhood Studies collected by Lindey Cookson of the University of Sunderland:

1.1

Example provided by Fay Cavagin, Lecturer, University of Sunderland

BA (Hons) Childhood Studies

Level 5 module: Childhood Health

Traditional Essay question:

Select a contemporary health topic to debate appropriate interventions that could be used for children and young people. Consider the implications for inequality within your chosen topic and the role of partnership working.

Authentic Assessment Example:

You work for Public Health England as part of their health promotion team. A local charity has contacted you as they have been granted some funding to provide support to children in the community with contemporary health issues. They have asked you to select a contemporary health issue that you think is important to target. They want you to produce a multimedia presentation that they can use to train their team who work directly with the children and young people.

They have asked you to:

Create a presentation which either includes a video or voice-over for the charity to use (the information below has been aligned from the learning outcomes of the module):

- Introduce your contemporary topic, linking to debates associated with contemporary health and well-being in relation to children and families.
- Discuss the implications of inequality for children and young people with direct relevance to your chosen topic.
- Apply health models and initiatives, evaluating their use with links to appropriate reading.
- Debate appropriate interventions and how they can be implemented with direct links to your contemporary topic.
- Explore the role of partnership working, considering different professional roles and how effective working can occur between professionals and the children/parents/carers.

1.2 Example provided by Gayle Blackburn, Senior Lecturer (lead for the Early Childhood Graduate Practitioner Competencies, University of Sunderland).

BA (Hons) Childhood Studies (with Early Childhood Graduate Practitioner Competencies)

Level 4 module: Child Development: theory into practice

Traditional Essay question:

Select two resources which are used to promote development and learning with young children in an early years setting. Write an essay to examine how these resources are used in settings and their links to theory, policy and practice. Explain and discuss the learning and development strategies which are encouraged through these two resources.

Authentic Assessment Example:

As part of your development as an Early Years graduate practitioner, you are **asked to plan, design, produce and implement** two resources to support child development, with a clear rationale to explain how each resource supports young children's development and learning in relation to current **theory, policy and practice**. For your assessment you will:

- Create two resources and use them in your placement with young children.
- Present your resources to your peers and academic tutor in a small group – explaining the processes involved with the design of your resource, which **learning and development strategies** you **engaged** with during planning, making and implementing these resources. For example, links to EYFS, choice of materials – why?, Are your resources inclusive?, Health and safety considerations, reflection on the implementation, how will you adapt for future use? Did the children engage well with the resources? Could they be used as part of continuous provision?
- Your peers will be encouraged to ask you questions on this to enable you to have a reflective and professional dialogue on your resources and their implementation.

NB. This assessment can be amended slightly during lockdown when students have difficulties accessing placements. In this case they do not have to implement the resource, but they can still design and create the resources, 'present' them to their peers and tutor, and engage in a reflective and professional dialogue.

The above assessment will address the following learning outcomes:

- Explore a range of strategies designed to support the development of children.
- Examine the interrelationship between theory, policy and practice.
- Engage with learning and development strategies for children and reflect upon own learning during fieldwork visits.
- Design and produce resources for use to support children's learning and development.

1.3 Provided by Gayle Blackburn, Senior Lecturer (lead for the Early Childhood Graduate Practitioner Competencies, University of Sunderland).

BA (Hons) Childhood Studies (with Early Childhood Graduate Practitioner Competencies)

Level 5 module: Observing and Assessing Young Children's Development

Traditional Assignment:

Produce an essay – “Discuss and evaluate the processes involved when observing and assessing children. Consider the requirements of the EYFS and variety of ways which can be used to record and report these observations and assessments. Evaluate the observation and assessment techniques which could be implemented”.

Authentic Assessment Example: A Portfolio of a Child’s Development and Learning

Part A – produce a Learning Journal (part one of the portfolio).

Watch a series of observational clips of one child (using videos provided on the CANVAS site). Write an observation of the same child in each of the videos and put these into a portfolio (learning journal) of your own design and showing a variety of different types of recording observation methods (one must be a narrative observation). At least 5 observations should be included.

Part B – Written evaluation/ reflection to include as part two in the portfolio.

Using the observations/learning journal from part A, analyse the child’s learning and development in relation to the Early Years Foundation Stage (Development Matters). Identify and discuss possible next steps for the child and suggest a range of experiences/activities that could be offered to enhance their development and learning. You must also justify why you have chosen certain methods of observations, reflect upon whether they were effective, and how this learning journal meets the requirements of the EYFS.

Learning outcomes to address in this assessment:

- Demonstrate an understanding of the process of observing a child’s learning and development.
- Demonstrate the ability to analyse observations in relation to child development theory and the EYFS.
- Identify when different techniques should be used to gather data on children’s learning and development.
- Detailed understanding of the way observing and assessing contributes to young children’s development and learning.
- Detailed understanding of the different ways in which young children’s learning and development can be recorded and reported, including the requirements of the EYFS.
- Evaluate the effectiveness of different ways of recording and reporting on young children’s learning and development.

1.4 Example provided by Gayle Blackburn, Senior Lecturer (lead for the Early Childhood Graduate Practitioner Competencies, University of Sunderland).

BA (Hons) Childhood Studies (with Early Childhood Graduate Practitioner Competencies)

Traditional Essay question:

Produce an essay which evaluates strategies used when supporting children's development from 0-3. Provide a critical discussion of the theoretical approaches which are embedded within an Early Years curriculum and the role of observations and assessments within this curriculum.

Authentic Assessment Example:

- You have been invited to an interview for a lead practitioner role in an Early Years setting. As part of the interview, you are required to deliver a presentation to the interview panel on your own ideas for a new approach/ curriculum to be considered for use in the early years. Your new approach/ curriculum should be informed by research into the needs of young children to best support their learning and development.
- To support your development of this presentation you should consider the title of your curriculum and the age range for which you are developing the curriculum. You must explain the role of observation and assessment, the role of play and practitioners. Ensure you highlight any influences from theories or other curricula/approaches, and also which areas of development the curriculum will support.
- Consider your audience for your presentation – you are presenting to other lead practitioners so ensure your links to theory and relevant literature critiques are at an appropriate level. Show reflective skills within your presentation by acknowledging the benefits and also the limitations of your potential approach/ curriculum.

Learning outcomes addressed:

- Critical evaluation of the notion of developmentally appropriate strategies in relation to facilitating children's development across the foundation years of childhood.
- Critical exploration of the different theoretical approaches to develop, design and justify an appropriate curriculum for children in the foundation years of childhood.
- Critical reflection and appraisal of techniques of observation and assessment in the foundation stage of childhood.

Secondly, here are four examples from Bangor University, thanks to Fran Garrad-Cole for collecting them.

2.1 Counselling Skills: Fay Short, Bangor University

Aims and Learning Outcomes

Our Counselling Skills module provides Psychology undergraduates with an introduction to the field of counselling and psychotherapy. This module aims to give an insight into the work of a counsellor and an understanding of the therapeutic process, with focus on critical and controversial issues such as boundaries, contracts, and ethical dilemmas. The key learning outcomes on the module are to critically analyse theories in counselling, apply effective communication skills in practice, demonstrate insight into the self, and evaluate the role of supervision in therapy.

Example of a traditional assessment

How does supervision provide a forum for exploring client cases and reflecting on the self as a therapist? Write a 1000 word essay analysing the supervision experience in therapy and drawing on your understanding of therapeutic approaches.

Alternative authentic assessment

An alternative assessment used on our programme is an oral discussion group exam which mirrors the experience of group supervision.

Students form small groups of four at the start of the course, contract within those groups to work together through the semester, and then sit the exam as a group at the end of the course. The small group pretends that they are a supervision group and they discuss a new case study each week. Each case study is delivered as though a practising counsellor has brought a concern about a client case to the group for support and guidance. See below for an example of a case study.

At the end of the semester, the group attend an oral discussion group exam. They are presented with an unseen case study (same style as those used each week) and discuss the case for twenty minutes. The discussion is observed by a tutor who grades their individual contribution. They are assessed on engagement in the discussion (communications skills), knowledge of how theory applies to the case (understanding of counselling), and insight into the self (self-awareness).

This assessment allows the student to actually experience the benefits of supervision, rather than hypothetically considering the role of supervision in counselling. It also provides genuine experience of something that is common to the work of a counsellor (authentic) and develops a range of important transferable skills (e.g. groupwork, managing information live and in the moment, interpersonal skills, etc).

After the oral exam, students are asked to immediately complete and submit a short form reflecting on their performance. This form contains the marking criteria for the assessment on which students grade themselves. Self-grading does not influence the grade given by the examiner, but it provides a point of comparison once grades and feedback is returned. This encourages metacognition by identifying potential blind-spots (what do students think they do well but actually do poorly?).

Example Case Study

“My name is Charlie and I’m a therapist working on a voluntary basis in a charitable organization that helps people experiencing mental health difficulties. I work with clients in an office room at the charity headquarters. I have been seeing a client named Jordan for the last six weeks. Jordan was referred to me by a GP following a diagnosis of anxiety.

In the first session, I felt immediate warmth towards Jordan. I think I’m older than Jordan, and our work together reminds me of spending time with my kids. Jordan mentioned that it “felt safe” to be with me and explained that “I know you will take care of me”.

In the last session, Jordan described feeling worried about the future and explained that “everything just feels completely overwhelming”. After reporting recurring nightmares, difficulties eating, and feeling sick every morning, Jordan stated that “I am sure something really bad is going to happen”. Jordan claimed that “everything always goes wrong for me, so I might as well just give up now”. I felt worried about Jordan and asked what “giving up would look like” but Jordan did not answer directly and only replied that “at least it would stop me from worrying all the time.” This happened at the very end of our scheduled time, so I brought the session to a close and reminded Jordan about the time and date of our next session. But I have felt increasingly worried after the session and I am considering telephoning Jordan to check whether everything is okay.”

Discuss how you might respond to Charlie as though this issue is being brought to group supervision. Consider risk, ethics, and the therapeutic relationship in your discussion. You should also explore possible explanations for client and therapist thoughts/feelings/behaviours and consider some potential therapeutic interventions before/during the next session.

2.2 Aspects of Clinical Psychology **Azlina Amir Kassim, Bangor University**

Aims and Learning Outcomes:

1. Demonstrate an understanding of the current edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V).
2. Think critically regarding the biological, sociocultural and psychological perspectives of psychopathological disorders, and apply evidence-based knowledge in conceptualising the causes and treatment of these disorders.
3. Demonstrate knowledge and understanding of the major psychopathological disorders and their treatments.

Traditional essay example (1500 words):

Select a mental disorder that is listed in the DSM-V. Discuss and evaluate aetiological models related to the disorder and current treatment approaches.

Authentic alternative assessment (1500 words):

1. Select a mental disorder that we have covered in class and is listed in the DSM-V that you would be interested to do your research on.
2. Rewrite a story/write a case study as it would be if the character you have chosen had that disorder. Your character can be anyone who is famous (dead or alive), or a fictional character (e.g. Cinderella, Wonderwoman, Harry Potter etc), or even a character that you have made up.
3. Your story must incorporate research knowledge based on an extensive review of the literature. This would require you to do some research on the chosen disorder and use the knowledge to guide the direction and plot of your story. Your story would show the **application** of the symptoms, aetiology (causes) and treatment. You would describe the character having the symptoms, you would have the character go through some circumstances or causes (biological/ psychological/ social) that may trigger the disorder, and finally take the character through an appropriate treatment.
4. You are required to show support to the story using citations based on your reading and also demonstrate critical appraisal. You should not use citations within your main story, so to successfully demonstrate research support and further (relevant) information, or critical appraisal, you may narrate the story using different perspectives (dual narrative). Using dual narrative, you will write your assignment in two styles. In one style, you are narrating the story; in the other you are narrating it showing support or evidence from research. Make sure that these two styles are distinct by using different font styles. The word limit includes your story. See below for an example:
5. Example: You are interested in writing on depression. Based on your reading of the literature, you learn that individuals who grew up with a parent who has depression show more depressive symptoms compared to individuals who grew up in a healthy household. You also learn from the literature that there are multiple pathways to an individual suffering from depression when a parent has depression, such as genetic factors, observational learning etc. You also learn from peer reviewed sources that depression and substance abuse are linked. You may have also read about behavioural activation therapy (BAT), which is a suitable therapy for depression.

Here is a fictional example to demonstrate the format for students (all references are fictional):

Life has not been easy for Dumbledore. From a young age, his mother also suffered from depression after an encounter with a *dementor*, and was not always able to provide for him.

Depression can be caused by hereditary factors (Smith & Chen, 2018). Apart from genetic transmission, observational learning could theoretically explain the development of Dumbledore's depression as he could have learnt these behaviours from his mother.

As a teenager, Dumbledore was introduced to cigarettes and drugs. He secretly smokes 2 packets a day ...

Cohen and Donald (2017) reported that people who are depressed also engage in substance abuse, where they may engage in this behaviour to escape from guilt, stating that depression causes substance abuse. Whilst clear links have been established between the two factors (Davey & Price, 2018), a causal factor is yet to be clearly established. While Cohen and Donald (2017) claimed causation, the study included only 11 participants, and did not control for predisposition to substance abuse, thus a causal link is not convincing.

As Dumbledore lost the magic wand challenge with Potter, he was required to join the Quidditch team as his penalty for losing. Potter's intention to get Dumbledore out of his tower and on his broom was to change Dumbledore's unrewarding environment – he wanted Dumbledore to meet other people, win (or lose) a few Quidditch challenges and to make more friends! ...

This treatment is known as Behavioural Activation Therapy (BAT), based on operant conditioning principles. BAT is based on Lewinsohn's (1969) theory.....

2.3 Haematology

Dylan Jones, Bangor

Module learning outcomes:

1. Critically discuss the role of blood products and haemopoietic stem cell transplants as therapeutic interventions.
2. Critically discuss the most frequently used pathology laboratory tests used in haematology and blood transfusion and their diagnostic significance.
3. Critically discuss the types, causes and diagnosis of malignant and non-malignant haematological disease.
4. Critically evaluate the role of molecular diagnostics in haematology.

Traditional assignment: Essay Exams

Students were given a choice of 4 essay style questions along the lines of “Discuss acute myeloid leukaemia”, “Discuss the use of blood transfusion in managing the chronically ill” etc.

Alternative assignment: Patient case studies/Clinical Scenarios

Context: Students are provided with patient case studies which they are expected to explore. These case studies include patient blood test results, clinical history and access to scanned blood slides and students are expected to analyse the findings.

Task:

- Students interpret the findings provided for 2 patients.
- Students offer a diagnosis and justify their diagnosis (~500 words) (L.O 2 and 3).
- Students suggest a number of confirmatory/further diagnostics and justify (~250 words) (L.O 2, 3 and 4).
- Students suggest a treatment plan for the case study including the use of blood products (~250 words) (L.O 1).

Justification: Producing a clinical report such as this is a much more authentic application of skills and knowledge gained during the module and also more deeply assess whether a student has “understood” the rationale behind the diagnosis of key diseases.

2.4 Marine Geoscience

Example supplied by **Dei Huws** in Ocean Sciences at Bangor University.

This assessment forms part of a ‘Practical Oceanography’ module where students gain experience of conducting marine geophysical surveys offshore. Sessions covering the related theory are covered in other modules, although there are some classroom events that introduce students to the more technical aspects of survey instrumentation.

Typical traditional Exam/essay question

What are the main practical aspects that need to be considered at the planning stage of a geophysical offshore survey for a prospective offshore engineering development?

Authentic assessment alternative – Technical Tender Document Exercise

Introduction

The objective of this exercise is to draw-up the technical document that an offshore survey company might submit to a client (e.g. an energy company), in an attempt to be awarded a contract. You take on the role of the survey company. The technical document would normally comprise part of a wider “tender document” that would also typically include financial and contractual parts. These latter parts do not form part of the assessment exercise.

The invitation to tender has been sent to your company to conduct a site investigation for the most recent round of licensing for Carbon Capture and Storage in the oil and gas fields in Liverpool Bay.

This is loosely based on an actual project.

You will need to complete the task by producing a document of no more than six pages. Before final submission, you need to arrange a meeting with the client’s consultant, myself, Dr R. O’Gant.

The client's goals

The client has two main goals:

1. To assess the evidence for any present-day gas seepage at the seafloor. They (the client) are initially thinking that the contractor will aim to map any seafloor manifestation of leaking gas, and any shallow migration pathways for such gas e.g. shallow faulting, or near seafloor manifestation of deeper-rooted faults. They've specified what they think would be needed; but don't be afraid to suggest other methods or datasets, if anything springs to mind.
2. To define a new pipeline route, in term of hydrodynamic, sedimentological, geophysical and geotechnical characteristics.

The survey area

Co-ordinates of the vertices of the main survey area are given in the European datum 1950 (ED50) on the International Spheroid of 1924. You'll need to change them to WGS84 if you want to use Google Earth to show them as a kml file. Instruction on how to format a kml file is readily available on the web – discuss with Dr R O'Gant if required. The TatumGIS Free Coordinate Calculator is recommended for datum transformation.

Specific requirements of the client

Over the main site, the client has stated that they want data for:

- i. Seafloor bathymetry (at 1 metre, or better, grid resolution)
- ii. Seafloor backscatter information
- iii. Any area where rock outcrops on the seafloor
- iv. The detailed mapping of any identified gas-seepage zone (≤ 0.5 m grid size)
- v. The position, dimensions and grain size of sediment bedforms
- vi. The sub-seabed stratigraphy down to a depth of 100 m below seafloor

There is also a new pipeline planned as part of the project – the coordinates of which are given.

Over the pipeline corridor, the client wants to know:

- i. Bathymetry for the pipeline corridor
- ii. Tidal current direction and flow rate at 1m above the bed and 1 m below sea surface for different states of tide for three positions along the corridor
- iii. The position and nature of any seafloor hazard
- iv. The area where rock outcrops on the seafloor
- v. The position, dimensions and grain size of sediment bedforms
- vi. The likelihood of active sediment transport in the area (migrating bedforms)
- vii. The seasonal wave climate
- viii. The sub-seabed stratigraphy down to a depth of 10 m below seafloor
- ix. The shear strength and, for sands, the relative density of the sub-seafloor material down to 3 m.

The client wants you to also specify:

- a) Anything currently known about seafloor sediment types.
- b) What sort of instruments you would plan to use and why. Specify make and model of all instruments. You will need to include geophysical, geotechnical and positioning systems and specify the TRS (mapping datum) to be used.
- c) What sort of survey vessel(s) would you use?
- d) Which harbour would you work out of? (and any practical limitations associated with that, if relevant).
- e) Detailed survey line plans.
- f) A brief outline of the data analysis and interpretation techniques (specifying the software you intend to use).
- g) The timing programme of the data acquisition, processing and interpretation phases in the form of a GAANT chart. The client will not be awarding the project until 1st June, 2021 and requires the data in report form by 30th August 2021 (that's not your deadline for this assessment, it's a fictitious one for the survey in terms of working to the suitable tides etc!).

Meeting with the client's consultant

You should arrange to meet me, Dr R O'Gant, for an interview-style consultant meeting before submitting your work. You could be questioned on any of the above aspects. Interviews will be formal and last no more than 15 minutes. This is effectively a slightly out of the ordinary feedback meeting!

You will not be expected to calculate potential costs, but the best plans will achieve the client's aims in the most frugal way, i.e. do not employ techniques unnecessarily.

Thirdly from Trish O'Connell of GMIT in Ireland are two examples from the Biopharmaceutical Science domain.

3.1 Traditional exam question to be replaced:

Explain what is meant by Process Capability. In your answer describe in detail what prerequisite should exist prior to conducting a PCA study. How might this prerequisite be achieved?

Replaced by:

Context:

For a specific cell culture, a Bioreactor temperature is specified to maintain a nominal temperature of 50 degrees. For this culture to grow successfully it is imperative that the bioreactor temperature be no lower than a specified 45 degrees and no higher than a specified 55 degrees.

Tasks:

Task 1. Analyse the accompanying dataset to determine the nature of the data.

Task 2. Identify the optimal method of assessing the stability of the data from this process.

Task 3. Interpret the stability using the method you have identified in Task 2.

Task 4. Conduct a Process Capability Analysis on the process depending on the outcome of Task 3, or alternatively explain why you could not.

Task 5. Summarise your findings, paying particular attention to recommending corrective action should this be required.

3.2 Example of an authentic cross-discipline project created for Year 3 Biopharmaceutical Science students

Context:

Drawing on your studies and practical lab work in Microbiology identify a specific process that you have performed and conduct a Failure Mode & Effect (FMEA) study on this process.

Task 1. Identify a microbiological process ensuring it has a clear and specific Start & End points.

Task 2. Create a process map of the identified process using correct Flow charting symbols.

Task 3. Research and design a process FMEA template.

Task 4. Input the process steps into the template and brainstorm potential failure modes for each step identified.

Task 5. Calculate the RPN values by rating the Severity, Occurrence & Detection likelihoods.

Task 6. Beginning with the highest RPN value generated use your knowledge of the process to suggest mitigation strategies for the potential failure modes.

Task 7. Repeat & re-evaluate the RPN values for the mitigations identified.

Fourthly here are two examples submitted by Jo Rushworth of De Montfort University.

4.1 This is an example of a real “capstudy” assessment, designed by NTF Dr Jo Rushworth and colleagues at De Montfort University (see: A novel “capstudy” assessment for bioscience students based on the principles of Universal Design for Learning (UDL).” **Rushworth JV, Lawson G, Desai, UJ, Juma N and Moriarty A** (2020) in: Pratt Adams, Simon, Uwe Richter, and Mark Warnes. *Innovations In Active Learning In Higher Education*. E-book, Falmer, UK: University of Sussex Library, 2020, <https://doi.org/10.20919/9781912319961>).

Biochemistry: Traditional exam question:

(a) Describe how paracetamol and caffeine overdose could be detected in the clinical biochemistry laboratory; (b) analyse the data provided and determine whether the patient has had an overdose of either.

Authentic assessment example: A “capstudy” – this is an end-of-unit assessment which pulls together the practical and theoretical content from over the course of the module or unit. Its name combines a case-study with capstone assessment and is based on providing students with an authentic, UDL-friendly, problem-based assessment.

The scenario: “What happened to Ashley Taylor”?

Information provided to students:

Name: Ashley Taylor | D.O.B.: 27.03.95 | Height: 171 cm | Weight: 73 kg

(note: the fake student’s gender and ethnicity are ambiguous in line with UDL)

Students have access to a fake Twitter account [@ashley_taylor](#), which contains a mixture of real clues and red herrings, as well as Ashley’s bin contents and this fake newspaper article:

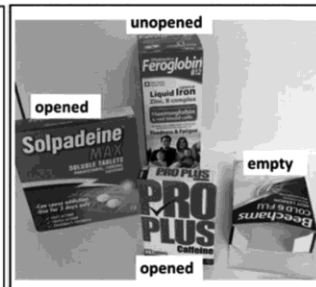
A



B



C



Each lecturer also provides a problem-based learning (PBL) clue for analysis, which might turn out to be useful or may be a red herring. Examples included Ashley's blood glucose reading, genetic sequencing to look for mutations that might cause sudden cardiac death syndrome, and histopathology and immunofluorescence microscopy images of Ashley's liver cells. These relate to the learning outcomes of the module.

The students are trained during the lab practicals to carry out analytical techniques (e.g. GC, HPLC, UV-vis spectroscopy), to analyse data, perform calculations and to write a lab report.

The capstudy assessment:

At the end of the module, the students work in small groups to solve the problem of "what happened to Ashley Taylor"; they have a scheduled dry-lab practical in which to complete a report.

- Piece together and critically analyse all of the clues so far and submit an initial hypothesis and request for clinical data at the lab door (20% of the marks).

- Use the clinical data provided in lab (even if your hypothesis is incorrect, you will be provided with clinical data) to complete a written report which should contain data analysis, conclusions and diagnosis (80% of the marks).

4.2 Education / PGCE

This is an adapted version of a real, novel assessment called a PASTA that was designed by NTF Dr Jo Rushworth at De Montfort University.

Traditional essay question (3,000 words):

Write an essay on the current challenges and solutions for teaching today's students, with reference to the literature and in the context of your subject discipline.

Authentic assessment assignment:

Task: record a Patchwork Screencast Assessment (PASTA)

A PASTA is a reflective screencast in which you should explain and evidence your developmental journey as a teacher throughout the first module of the PGCE. You need to demonstrate how you have engaged with theory, literature and best practice to provide innovation and excellence in the learning and teaching, assessment and feedback and support of your students. You should reference the literature and you must provide evidence to illustrate your journey, describing how you have developed as a teacher and highlighting areas for further development. Refer to the marking scheme to ensure that you evidence the required learning outcomes.

You might wish to include:

Quotes, diagrams, photographs, metrics, graphs/infographics, survey results (including in-class polls) teaching videos (with consent of participants), interviews or transcripts with colleagues or students.

How to make and serve your PASTA:

Throughout the course, you will be given weekly or fortnightly homework tasks for reflection. These will ask you to consider theory and literature in the context of your own practice, to reflect on and develop your practice, to observe and be observed etc. These will provide the key ingredients for you to then blend and serve your PASTA – which should be a reflective, personal and honest journey of your development as a teacher, which places in context how you have utilised learning theory and pedagogic research.

The submission format is flexible in line with universal design for learning (UDL); the only stipulation is that there should be some audio narration and some visuals. The balance of text to speech is up to

you. Written prose is not required but is allowed. Many people choose to utilise Panopto for this task, but this is not mandatory. The maximum length is 15 minutes (+/- 10%).

Notes:

The PASTA is transferrable to other disciplines and is especially useful where students are required to evidence development in some sort of practice along with engagement with theory/literature.

The flexible submission format is in line with UDL.

Contact jo.rushworth@dmu.ac.uk for further details.

5. Fifthly, from Huddersfield University, here is an example from Engineering Education from Alistair Sambell, from the domain of Electrical and Electronic Engineering

Context: This is a second-year electronic engineering undergraduate module on Communication Systems. Traditionally assessed by unseen examination, moved to course work tasks.

Module Learning Outcomes

By the end of the module you will be able to:

1. Appraise the common communication technologies, identifying key performance features.
2. Analyse the performance of common analogue and digital communications systems.
3. Design a simple communication system for a practical situation, defining the required sub-systems and evaluating applicable technologies.

Scenario

In your role as a qualified engineer, you have been asked to produce a feasibility study for a dedicated, secure and robust internal data link for a manufacturing company that operates across two sites, separated by a distance of 1 mile.

1. Devise a question list that will form the basis for the system specification. In other words, what information will you need to know to allow you to design a system? This should include technical parameters such as the type and quantity of data, number of users, mobility and security requirements, alongside practical considerations such the physical environment it will operate in, expected system lifecycle and cost. Your list should be compiled as a simple A4 table of questions, and you may wish to add options for the

answers where appropriate. These questions will form the basis for a class discussion in which we will agree the detailed design brief. [Formative peer review activity]

2. Based on the design brief we have agreed in class, identify the advantages and disadvantages of three quite different approaches to the communication link (for example analogue and digital, wired and wireless). You should produce a short (maximum 6 slides) power point report that summarises your analysis. You may also want to highlight any areas in which you think the design brief is incomplete or contradictory. You will have three minutes to present these to the class. [30%, including tutor and peer review]

3. Following your presentation and class discussion, select one of the approaches you have identified and design a system for the company. You should use a mathematical modelling package (e.g. Matlab) to analyse and verify the key performance parameters, including the expected reliability of the link. You should consider practical implication such as cost and environmental impact. You should present your work in the form of a short (4 pages of A4 maximum) report written for the company board. The report should demonstrate why you have selected your preferred design, the anticipated performance based on your modelling, and the practical aspects of introducing the system for the company. [70%]

6. **Sixthly here is a fictionalised example from the domain of English (which both Kay and I studied). This is based on an example I heard about some years ago, but I cannot attribute the source due to it being lost in the mists of time!**

Traditional essay

Select three novels from the A E471 Contemporary Fiction module and outline the shared themes and approaches of authors from diverse cultures, together with broader diverges in their approaches, writing styles.

Alternative authentic assessment

You are doing a voluntary placement in a recently-reopened post-pandemic independent bookshop which is very keen to build on an established loyal customer base who tend to be mainly older women educated to A level or beyond, but who are also keen to foster new audiences from the local community of younger readers. Select at least two novels you have studied on the A E471 Contemporary Fiction module plus another post 1970s novel of your own choice and produce the following outputs:

1. **Reader notes for each of the novels** that can be produced as 20cm X 5 cm bookmarks that can be placed on displays of these books and popped into bags at the till for any books purchased. It is your choice whether to make these landmark or portrait, how much detail to include and what font and font size you use, and what to include in the text.
2. **A 200-word rationale** for the choices you made in producing the Reader notes.

3. **A 500-word outline for the bookshop newsletter aimed at the newer target audience** in which you synthesize the key connecting themes of the chosen books in an accessible format and explain why the novels can speak to readers under 30.
 4. **An 800-word blog for the bookshop website** in which you write from a personal perspective about why you value these three texts and what they mean to you.
 5. **A poster for the window display for one of the books** (presented as a PowerPoint slide) in which you include at least three positive quotes from critics about the text to raise reader interest. Your poster should include at least one image.
 6. **Briefing notes for the host of a bookshop live event** by one of your authors containing brief biographical details and up to eight questions the host could ask the author. If your author you choose is not alive, for the sake of this assignment, you can ignore this fact!
-

Finally, we have received some great examples in a slightly different format that don't fit our model but are included here because we think they are interesting!

- A. **Three activities in the Biosciences provided by NTF Chris Willmott of Leicester University. Two he advises are formal publications, the third is on the NTR**

Willmott CJR (2020) The POSTnote Assignment: Preparing a scientific report to Government as an authentic alternative to essay writing
[https://figshare.edgehill.ac.uk/articles/report/The_POSTnote_Assignment
CC_docx/12826526](https://figshare.edgehill.ac.uk/articles/report/The_POSTnote_Assignment_CC_docx/12826526)

Willmott CJR (2015) Teaching bioethics via the production of student-generated videos *Journal of Biological Education* 49:127-138 <https://doi.org/10.1080/00219266.2014.897640>

Willmott C (2013) Headline Bioethics: Engagement with bioethics in the news *Bioscience Education* 21:3-6 <https://doi.org/10.11120/beej.2013.00017>

- B. **We received from Sarah Browne of the University of Wolverhampton this example of a great authentic assessment designed to replace an entirely practical assignment during Covid times:**

This is an assignment for second year BA (Hons) Musical Theatre students. The module (Musical Theatre Repertoire: Intermediate) is usually an entirely practical module and students undertake a series of practical workshops exploring techniques that were used in the creation of the 1967 musical, *Hair*. These techniques are trust-based games and similar contact improvisation techniques. Needless to say, none of this was possible despite Covid

security measures. Whilst students were able to participate in socially-distanced ensemble performances, we modified one of the performance assessments to incorporate a solo response using social media. The module was delivered in the form of blended learning and online sessions focused on five relevant topics, covering both the 1967 context of the original production and the contemporary era: race, war/death, climate change, gender, sexuality.

Learning outcomes:

- LO1 Demonstrate knowledge and understanding of forms, practices, traditions, texts, theories and histories of musical theatre in their cultural, historical and contemporary contexts.
- LO2 Engage with, participate in, and perform musical theatre in a range of contexts.
- LO3 Understand the interplay between practice and theory, and between dance, drama and music, and be able to use those understandings in a dynamic, ethical and enterprising way.

The solo performance element of the assessment was reimagined as follows:

“The Musical Hair always reflects the contemporary age in which the production is set. In the original Broadway production (1968) it dealt directly with contemporary issues: the Civil Rights movement, gender inequality, drug usage, the environment, sexual freedom and the Vietnam war. In the 2015 Hope Mill revival, the same issues remain but the production used the context of Trump’s presidency as it’s source of performative rebellion.

In 2020, the world faces the same issues and concerns: gender inequality, the Black Lives Matter movement, drug addiction, climate change and pollution. The population now faces an opponent deadlier than the Vietnam war: a global pandemic.

Your performance will reflect the contemporary era in which we live.

SOLO PERFORMANCE: “You must choose one solo song from *Hair* focusing on any of the topics studied, and record the vocals and visuals in a format reflective of the era e.g. using social media as a stimulus. You will be marked on vocal performance and the creative approach adopted.”

We received submissions which used TikTok, Instagram, YouTube, WhatsApp and other similar platforms as the mode of communication (Donald Trump and Betty Friedan in the same WhatsApp group was amusing!) Student achievement surpassed previous years.

C. Here is an example from the field of Advanced Financial reporting sent to us by Lisa Wakefield of De Montfort University

Assignment Brief

Prepare a transcript and record a five-minute podcast to discuss the following issues:

Coronavirus is not just a world health emergency; it is an economic one too. The economic impacts are plain to see and emergency provisions are being made worldwide in an attempt to support individuals, business and anyone who advises them.

<https://www.icaew.com/coronavirus>

Requirement

Select one area of financial accounting which you consider has been impacted by the COVID-19 pandemic – this could be but is not limited to impairments, valuations, fair value accounting, going concern, foreign currency stability or government grants. Explain why there is an impact to the accounting.

Assessment Learning Outcomes

Following completion of this assignment students should be able to/have:

- ◆ Consider the financial reporting standards applicable to reporting the results of individual and business combinations.
- ◆ Evaluate the current developments to the financial reporting framework and the implications of those developments.
- ◆ Critically review financial reporting standards in issue and evaluate the associated commercial issues.
- ◆ The ability to apply appropriate skills to filter, analyse and evaluate data and draw reasoned conclusions and made appropriate recommendations.
- ◆ The ability to learn independently and self-manage learning needs.
- ◆ The ability to communicate in a manner appropriate to the intended audience.

Assessment Transferrable Skills

This assessment has been developed to ensure students have the ability to:

- ◆ synthesis large volumes of information to develop a cohesive argument for or against a specific accounting treatment.
- ◆ follow guidance and comply with regulations.
- ◆ work within a set timeframe to respond to a given task.

- ◆ present information without an overreliance on visual support.

As a module team we recognise that for some of you the COVID 19 impact has been higher than for others. If you don't feel that you can write about this subject as it would impact you adversely – please pick a different economic crisis and email the module leader (lwakefield@dmu.ac.uk) to confirm which crisis you have selected then answer the assignment requirement on that crisis.

D. And here is an example from Thomas Wong of Heriot Watt University of an interesting assessment in Maths:

Instructions: The focus of this tutorial is to develop your mathematical writing skills.

- Work through the question until you have an answer you are satisfied with.
- Write up a complete solution to the answer you obtained, just like a written assignment. Your tutor will provide feedback on your solution.

Question: Texas hold'em is a popular variety of poker played across the world. As with most card games, there is a wealth of probability involved. In this tutorial, we will compute a few probabilities by making use of our knowledge of combinatorics and the sample space. Before we begin, a few key points to know about Texas hold'em:

- It uses a standard deck of 52 cards consisting of 13 different ranks (A being the highest down to 2 being the smallest). The four suits are equivalent, and no suit is larger than the others.
- For each hand, each player is dealt two hole-cards which only that player sees and nobody else knows.
- Five communal cards are then dealt face up for everyone to see.
- Each player uses their two hole-cards and the five communal cards to form the best five card hand.
- The rank of each hand is shown in the picture on the reverse side of this tutorial sheet (Source: WSOP website).
- The winner of the hand is the one with the highest rank five card hand. When comparing two flushes, the one with the highest ranked card wins.

In this scenario, you are playing heads-up (two-player) Texas hold'em. Your hole cards are $8\clubsuit, J\clubsuit$. The five communal cards are

$9\clubsuit, 5\clubsuit, 4\clubsuit, 5\heartsuit, A\heartsuit$

What is the probability of you winning this hand against your opponent?

Hint: There are a few things you might want to think about if you get stuck:

- What is the sample space in this context?
- How many different sets of hole cards can your opponent have?
- What is the best hand you can form with your two hole-cards and the five communal cards?
- Which five card hands can beat your best hand?
- For each rank, calculate the number of ways your opponent can have hole cards to form hands of that rank. This might require a case-by-case analysis.
- The probability of you winning is the complement of the probability of you not winning. Is there any chance for a tie?

Extension: We have the same set up. The difference this time, you are holding $8\clubsuit, J\heartsuit$ while the communal cards are

$6\clubsuit, 5\clubsuit, 4\clubsuit, 3\clubsuit, 3\heartsuit$

What is your probability of winning this hand against a single opponent? How does that probability change if there are two opponents? (your hand must beat them both)

Reference: Poker hands in decreasing rank: Royal flush being the highest down to High Card being the lower.

ROYAL FLUSH

This hand contains five cards in sequence, all of the same suit.



STRAIGHT FLUSH

This hand contains five cards in sequence, all of the same suit.



4 OF A KIND

This hand contains all four cards of one rank and any other unmatched card.



FULL HOUSE

This hand contains three matching cards of one rank and two matching cards of another rank.



FLUSH

This hand contains all five cards are of the same suit, but not in sequence.



STRAIGHT

This hand contains five cards of sequential rank in at least two different suits.



3 OF A KIND

This hand contains three cards of the same rank, with two cards not of this rank nor the same as each other.



2 PAIR

This hand contains two cards of the same rank, plus two cards of another rank.



1 PAIR

This hand contains two cards of one rank, plus three cards which are not of this rank nor the same.



HIGH CARD

made of any five cards not meeting any of the above requirements.



