CHOOSING AND USING fit-for-purpose assessment methods

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Introduction

This guide is designed to help you, as a member of staff at Heriot-Watt University, consider a broad range of assessment methods for your course and/or programme. Where assessment is designed to integrate fully with the wider process of learning, students are more likely to engage deeply and achieve highly.

In each case we will look at what the method comprises, sum up some of the benefits, describe some problems that can arise, and then conclude by offering practical guidance on putting these approaches into practice.

Here we focus principally on innovative assessment methods that can be more meaningful and engaging than traditional formats like conventional exams, reports, MCQs and essays, as we expect you are likely to be very familiar with their pros and cons already.

We are concentrating specifically on methods you might want to use, rather than broader approaches like self- and peer- assessment, group assessment, Computer-Based-Assessment and so on. That's because many of these assessment methods can be used as part of one or more of these approaches.

At the end of the guide, you will find references to some useful academic literature plus some additional sources on which we have drawn to write this guide.

The methods are listed alphabetically. Some are relatively quick and easy to implement, while others may involve more of an investment of time and energy.

Remember, if you are introducing a summative assessment method that your students haven't encountered before, ideally they'll be offered opportunities to have a risk-free rehearsal of the innovative assessment method beforehand. If this is not possible there should be plenty of opportunities for question and answer, discussion, briefing sessions, exemplars and so on in the lead up to the assessment.

Contents

01 Annotated bibliographies

What are they?

Rather than write a full essay or report, students can be asked to provide in hard copy or electronically, an appropriately referenced list of (for example) three journal articles, two book chapters and three web pages plus some grey literature (e.g. newspaper articles, blogs etc. on a given topic). Students would be asked to annotate the items on the list to show why these particular items have been selected and what was learned from them.

What are the benefits?

- These can be a very effective way for students to demonstrate their information literacy (and any gaps therein), enabling you to assess the process by which they seek and use reference material. This is particularly valuable in the early stages of a programme so that issues such as an excessive reliance on Google can be recognised and addressed
- They tend to be quicker to mark than full essays, and opportunities for plagiarism are more limited, because the annotations will tend to be idiosyncratic.

What can be the problems?

- If you don't limit the number of sources required, the open-ended nature of the task can result in excessive material being submitted by assiduous students
- If students are new to advanced study, or returning after a long period out of education, this can at first sight appear to be a challenging task
- Students might get the wrong idea that accessing the information is more important than using it.

Putting this method into practice

- Getting students to share and discuss their annotated bibliographies as a formative activity is a great way to help students get the hang of how they should be accessing information, particularly if they have come from contexts where libraries are much smaller and access to material such as journal articles and databases is much more limited
- Alternatively, you could try using this as the first summative assignment for students in the first semester of the first year immediately after they have had their introduction to information retrieval approaches, as a means of checking out techniques before poor practice can get established
- It can also be a useful task for students starting major projects or dissertations, to enable them to gauge the extent of material available on an area, so they can refine and hone their particular topic.

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02 Articles for publication

What are they?
Instead of writing essays or traditional reports, it can be a valuable assignment to ask students to write something similar to what they are likely to encounter on an academic programme, such as a journal article, or something more informal such as a magazine or newspaper article, or blog (see below for more detail about blogs/vlogs). They will need to review examples of the targeted publication so they can match their own writing style, referencing conventions and format to the ones under scrutiny in the samples.

What are the benefits?
- This is an authentic assessment approach in scientific and other disciplines where students are expected to use and potentially produce written outputs for different kinds of readers. Students can readily see the point of this kind of focused activity; for example creating a journal article can really help them understand how information is presented logically and sequentially in peer reviewed articles. This is likely in turn to help them better understand how to read and use this kind of published material when writing research reports, essays and theses
- In both this kind of writing and less formal formats like magazine articles, in order to be successful, students will need to think hard about writing style, tone and register, matching their own writing to the outlet they are targeting, thereby building a conception of what is entailed in writing for different audiences, which is a core graduate capability.

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What can be the problems?
- This can seem like a daunting task, and informal articles should probably be set rather than journal articles in the early stages of a programme. This kind of assignment will benefit from detailed briefings, collective practice runs and risk-free rehearsal to overcome the stress involved for those for whom this is an unfamiliar task
- Unless you put constraints on word length, this can make for a hefty marking workload
- Academics used to rigorous peer reviewing of actual journal articles can readily slip into tough 'Reviewer 3' mode, rather than offering formative and helpful advice for remediation and improvement.

Putting this method into practice
You could help your students tackle this task with confidence by:
- Providing lots of examples of the kind of writing you want them to produce for the assignment, in a live or virtual class session so they can collectively unpack how that genre of writing works in practice
- Spending time in your briefing session helping students to deconstruct an article of the kind you want them to write (perhaps even by literally cutting up a printed-out journal article into its separate sections and asking students in groups to summarise the function of say, the introduction, methodology, findings section and conclusions, and reviewing what makes graphs, diagrams and tables valuable in explaining ideas)
- In the same or a separate session, collectively doing a 'clarity index' exercise, looking at complexity of vocabulary, sentence length, complexity of sentence structure to enable them to match the register and tone of what they are trying to emulate
- Letting them see exemplars of other students' work from previous years so they can get an overview of what is required.

03 Blogs, vlogs

What are they?

Blogs are a relatively short, flexible, informal form of writing that can be used as an assessed task: students can be asked to write one-off or multiple posts, publicly online or in an enclosed course site on the university VLE covering matters of relevance to the course. Vlogs work in very much the same way but use video and/or audio rather than exclusively text. Both formats provide an accessible and relevant way for students to input often-complex ideas to a learning community and receive comments from peers and others, hence building a sense of engagement. As they assume a different kind of audience and register from a more formal assignment, they can demonstrate students' communication skills (including argument and persuasion) in diverse contexts. They can be used both formatively and summatively.

What are the benefits?

- Where blogs/vlogs are shared with other members of the course cohort, they can provide opportunities for interaction and community-building, potentially leading to stronger engagement with the programme
- For students new to the HE context, this can be an accessible way to enter into academic discourses, especially if their backgrounds have not provided coaching in, for example, formal essay writing, thereby building confidence
- For students entering higher education through access routes which relied principally on written assignments and exams, these formats can offer opportunities to communicate effectively in different, life-relevant ways
- Where a series of blogs/vlogs are required over time (say weekly) this promotes good habits of writing regularly, rather than leaving everything to the last minute to hit a single deadline
- This assessment approach is not readily plagiarised due to its reliance on personal responses
- Writing and sharing posts can foster reflection.

What can be the problems?

- Students who feel proficient in more traditional formats may find less familiar assessment tasks challenging
- Writing informally may come hard to students particularly those whose first language is not the one in which they are studying
- If students feel pressurised by the workload of regular blogging/vlogging this may lead to skimping of time and effort resulting in tokenistic inputs
- Publicly accessible blogs or vlogs may expose students to unwelcome external attention.

Putting this method into practice

- Exemplars can helpfully show students what's expected of them, so it may be helpful if students can review work from earlier years prior to starting their blog
- If students' backgrounds have not prepared them for working regularly online, they may need support to familiarise them with the VLE you use
- You should set very clear guidelines on word counts and duration of inputs and deadlines to avoid making review and assessment unmanageable
- Where students are commenting on each other's work, it is advisable to have conversations in advance about what constructive critique comprises

(This example builds on resources that were developed by the Eden Centre, LSE (n.d.) for which we are grateful).

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04 Critical Incident Accounts

What are they?

Critical incident accounts are an invaluable method by which course teams can access some of the experiences of students from contexts where they are away from the university setting. Typically, students out on placement or in practice are asked to keep an extended log or diary, and marking these in their entirety can be very time consuming and repetitive. For this reason, tutors can ask students to review the whole diary or log, and ask students to choose one or more critical incidents on which to reflect. In each case, they identify the context, their actions, the rationale for action and their reflections subsequently. You can usefully use a framework of the kind that is described in Method 18 on Reflective Journals.

What are the benefits?

- This can be a really helpful and authentic means by which assessors can gauge how well students are able to be constructively critical about their own performances. The simple act of choosing what instance to comment upon demonstrates their own capacities to make judgments about what is and is not important within a professional/practise context
- The approach used in undertaking this type of assignment is one that will carry them forward into their professional lives and is a valuable life skill
- Marking a critical incident account can be much more time efficient then marking a full journal/log which is likely to be wordy and unstructured.

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What can be the problems?

- Students early on in the programme might find it difficult to identify what kinds of incidents are worth reflecting upon, and a poor choice might result in a poor reflection
- Where they have mainly in the past been assessed by very traditional means, students might find this approach daunting
- Some students who are excellent in practice may not be good at writing about their experiences in analytical and structured ways.

Putting this method into practice

- As with any other method, showing students exemplars before asking them to attempt their own can be extremely valuable in helping them to understand the scope and extent of what is required of them. Additionally, it may be valuable to let students have practice runs before they commence their assessed work, for example, in an interim mid-placement interaction with staff and fellow students where they can get some formative feedback
- While it is most common for critical incident accounts to be in a written format, it is also possible to enable this approach to be used in dialogic situation with tutors, who can help to draw out students' experiences through probing questions, which may be helpful in the early stages for programmes where students are likely to be unfamiliar with this approach.

05 Debates and Moots

What are they?

Debates and Moots (Ringel, 2004) allow students who are orally proficient to shine in presenting their cases, in a context where their peers participate. Students are often required to take a position that may not coincide with their own opinions, for example in a debate, or to role play prosecutors, defenders, judges and juries in quasi court proceedings. Sometimes real professionals will take roles in the proceedings, for example as a committee chair hearing evidence or a judge in a court proceeding. They can be used in a wide variety of disciplines including built environment, social work, political science, economics, media, business as well as more traditional subjects such as law. For medical students, scientists and engineers, they can help students explore ideas around professional ethics and behaviour.

What are the benefits?

- In professions where graduates will be expected to be able to take part in the cut and thrust of live challenge and debate, these can be a very authentic methodology
- Undertaking the preparation for a moot or debate can require comprehensive reading round a topic and understanding political and legal contexts
- When they are run well, they can be very good at building students' critical and analytical skills and enabling them to demonstrate their ability to think on their feet and respond in real time to live challenges
- Many students find these activities really enjoyable and often they are able to compete in local or national competitions. In some programmes where in-course activities emulate live on-going court proceedings, the students can become very well informed and on occasions may become involved in the real cases themselves as expert witnesses, as happened at the University of Northumbria in the 1980s.

What can be the problems?

- While some students may find arguing and debating natural and easy, others without the same richness of social and cultural capital may find the approach alienating and stressful. Others more used to traditional assignments may at first consider such activities frivolous and irrelevant, until the rationale for their application is fully understood
- Setting up such activities may involve quite a lot of advance preparation and costs may be incurred where accessing appropriate documentation (such as maps for planning applications) might involve payment
- Where students are assigned particular roles, it can be difficult to ensure equivalence of challenge for all students, giving an advantage to the main protagonists, so you may need to ensure that roles rotate.

Putting this method into practice

- Careful planning from the outset is necessary, as is inclusion of opportunities for students to see what this kind of assignment entails. This is fairly readily achievable when say, first year students are able to watch these activities being undertaken by final year students, or when videos have been kept of previous years' work
- Establishment of the assessment criteria with discussion early on will help students understand where to concentrate their energies and will clarify potential misunderstandings about the extent to which performance and content are weighted
- Unless there are dedicated facilities available within your university, for example, a simulated courtroom, you will need to plan carefully ahead to ensure that the best venue for this kind of assessment is available for your exclusive use.

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06 Critical Incident Accounts

What are they?

Engagement in assessment tends to be higher when students can readily see the applicability of their assignments to their lived experiences. In this type of assessment, students can be given a design brief that sets out the need to address a 'problem' or issue that occurs in everyday contexts (usually employment or professional situations). This may be easy to imagine in disciplines with a practical component, such as Engineering or Computing, where, for example, students might be asked to create a Wi-Fi-link to join two campus buildings, but it may also be applicable to other disciplines such as the example from Arnold (2021) of designing a professional development template for a business student.

What are the benefits?

- Students see these assessments as relevant and authentic
- Because the work on the product is undertaken over real time, with the design process typically broken down into clear sections and potential periodic progress reviews, this helps to spread out time on task incrementally across the programme, thus avoiding last minute dashes to submission ('the wet ink syndrome')
- A further benefit is to enable staff and peers to monitor work in progress, offering guidance to avoid major disasters, which in turn also helps to avoid inappropriate academic conduct
- On completion, producing an actual product gives them something to show employers or talk about at interview with confidence. If the design is successful, it may even be able to possible to market their products individually or collectively with some students going on to form production companies on graduation, (and indeed HEIs are quick to report when that has been the case!)

What can be the problems?

- It can be challenging to come up with a sufficiently feasible brief for all students which offers equivalent-level opportunities for students to do well. It's also necessary that the briefs set can be accomplished in the timeframe available
- As with all assignments, planning ahead for students with additional and other needs to be undertaken, alongside thinking through the implications for students who need resits without necessarily having access to university facilities outside standard attendance periods, especially if the assignment includes group work.

Putting this method into practice

- It's useful to ask students to complete a reflective narrative which can explain and justify the design/production process, the decisions that were taken at various stages of the project, together with the options that were considered and evaluated but rejected, any teamwork employed as well as potentially elements like stakeholder consultation, engagement or feedback
- If you choose a design and build project (resulting in an actual product being created that you regard as being feasible and desirable), you need to be disciplined and realistic in the brief to ensure that timescales aren't overambitious and that students have equivalent access to the relevant support, materials and resources, and this can be challenging
- Organising a work-in-progress exhibition can offer opportunities for formative review by professionals in the field as well as peers and tutors, with resultant opportunities for refinements and improvements
- A final cohort-wide showcase of outputs can both celebrate achievements for the student cohort and show future students the range of activities they can expect in the future.

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07 e-Portfolios

e-Portfolios let students demonstrate what they can do using a wide range of forms of evidence: this is a more positive approach to assessment than seeking to find out what they can't do.

What are they?

Hard copy portfolios have been used in higher education for many decades, particularly in the creative and performance arts, but have subsequently been employed in a wide range of disciplines (Ciesielkiewicz, 2019). e-Portfolios have largely superseded these nowadays in many non-visual disciplines (and some visual ones too) as a digital means through which students can assemble, organize and share products of their learning in a variety of media to demonstrate the achievement of learning outcomes on a programme. An e-Portfolio can be used for a variety of additional purposes, including as a showcase for capabilities and knowledge in job interviews and research bids, allowing students to demonstrate originality and creative thinking alongside mastery of subject knowledge.

What are the benefits?

- e-Portfolios let students demonstrate what they can do using a wide range of forms of evidence: this is a more positive approach to assessment than seeking to find out what they can't do
- So long as the platform used is accessible to alumni after graduation, they can have a very long lifecycle, particularly because they can be updated and adapted over the years
- They enable students to demonstrate capabilities beyond subject knowledge such as effective communication in a variety of media, problem solving and critical thinking skills
- e-Portfolios can be used synoptically to bring together demonstrated achievements across more than one module, potentially saving assessors' time.

What can be the problems?

- As with hard copy portfolios, unless students are given directive guidelines on how much to include, they can be unwieldy to mark. This is particularly the case when students include video and audio clips which can be time consuming to assess in real time and can't readily be skimmed in the way that text can
- Students unfamiliar with the concept can find e-Portfolios daunting, so detailed briefing and risk-free rehearsal of component production is essential.

Putting this method into practice

- It is important that students have opportunities to access exemplars and engage with dialogue about them prior to commencing production of their own portfolio entries
- What often works best is to set firm guidelines about volume and scope of evidence to be included, for example in terms of an overall maximum word count for text, maximum numbers of tables and graphs, and total running time of audio/video
- e-Portfolios are easiest to mark if students are required to submit their portfolios with a contents page and a short narrative account (say 1,000 words max) outlining what is included, as well as a matrix mapping where submitted items provide evidence of achievement of the different learning outcomes. Assessors can sample evidence items to check that learning outcomes are met without slavishly having to review every separate item in detail.

08 Executive Summaries

What are they?

Rather than requiring students to submit lengthy reports on their practice or research outputs for assessment, it can be useful to ask them to produce an executive summary of their work in a strictly word-limited format which comprises a condensed summary of the full report. These are widely used in medical and research contexts, business and professional worlds, science and engineering to enable busy colleagues to rapidly access the main findings. They need to be pithy yet informative, accessible yet informed, and targeted to particular audience.

What are the benefits?

- In civil and professional society, executive summaries are often used to convey information in a concise and well-argued way to make a position clear to politicians, line-managers, research sponsors, potential clients and others
- The ability to take complex, incomplete and sometimes competing information and use it productively to summarise or make a case is a key graduate skill that is much in demand
- Executive summaries are inevitably much faster to mark than full written reports
- Where draft executive summaries are used as an interim element within a report submission, they can provide useful opportunities for formative feedback dialogues.

What can be the problems?

- Some students may think that because this is a short format, they need to put less effort in than submitting a full report, whereas the converse is true; prioritising information and writing it down in a concise format way is a complex graduate skill. It is a real challenge to sort out the key findings from background detail and to identify what are the most important areas to highlight, avoiding extraneous detail.

Putting this method into practice

- When briefing students about this assessment method, it will be useful if your exemplars demonstrate how the criteria work in practice. For example, it will be more important for their written work to be concise rather than comprehensive in its detail. It may be useful to show students a range of executive summaries from different kinds of documentation, for example scientific reports, legal proceedings, from parliamentary proceedings and so on
- Executive summaries need to be carefully structured to cover an outline of the issue being addressed, clarification of its purpose, a description of the key findings, scope, considerations and limitations and key conclusions. Often, they will include recommendations for action.

They need to be pithy yet informative, accessible yet informed, and targeted to particular audience.

09 Glossaries

What are they?

These are really useful for helping students get to grips with complex scientific terminology or other subject-specific vocabulary, by getting them to create resources for themselves or colleagues that explain in accessible language what terms mean. To prevent students just Googling standard definitions, you can ask more of them by asking them to include enhancements such as hyperlinks, mind maps, diagrams, mini-videos and so on which bring the terms to life. This active task can be quite challenging for students because to make a meaningful glossary item, they will need to have a deep understanding of what they are defining. (This is an adaption of ideas from Arnold 2021).

What are the benefits?

- This is the kind of task that requires quite a lot of student time on task and effort to produce something useful, meaningful and succinct. It's difficult to do this well if surface learning approaches are adopted, because producing the non-text items is likely to require more than Googling
- It can be helpful to explicitly encourage students to compare their glossaries with others', noting similarities and differences.

What can be the problems?

- Some students may still try to cut corners by simply Googling and assembling answers. A clear briefing for the task then becomes vital, so that the rationale is transparent to students and they understand that the process of undertaking the task is a key element of their learning
- There may be some benefits in asking them to compile non-enhanced glossaries under supervised conditions as a means of checking understanding.

Putting this method into practice

You can ask students to provide definitions in their own words for either:

- a range of terms in use in their professional practice, noticing how their use in context can vary from classical dictionary definitions. This will require them to read the literature in the field and compare this with what they are encountering on placement or in practice
- complex theoretical areas they encounter in their programmes, expressed in simpler terms for students junior to themselves, e.g. A-level students who won't need the depth of knowledge required at undergraduate/postgraduate level

You might want to share out a number of areas to cover among students so different topics are covered and then shared with all students. Where more than one student is covering the same terminology, you could ask students to vote which one they found most useful (with some staff moderation to ensure accuracy).

This active task can be quite challenging for students because to make a meaningful glossary item, they will need to have a deep understanding of what they are defining.

10 In-tray exercises

What are they?

Students are provided with a dossier of assorted documents and other media which they are then asked to organise, annotate and review, prior to being given a task making use of the information with which they've been provided. So, for example, a site engineer could be provided with all the documents necessary in advance of a site visit, to prepare for making a survey. After a given period, for example half an hour, they are presented with new information which changes the situation and requires them to address the task in a rather different way. For example, the site engineer might be informed that the site on which they are working has now become subject to an archaeological dig which requires them to pause work for eight weeks to allow access to archaeologists. This approach can be iterated over a short period of time (for example two hours) or over a longer period of time such as 24 hours. Usually, in-tray exercises are completed by individuals, but it would be possible to make this into a group task.

What are the benefits?

- This is a very authentic kind of assignment, because students are being asked to emulate the kinds of activity that they would use in professional practise, using changing and incomplete information in real time. Students very often can see the value of this kind of approach and will therefore engage deeply with it.

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What can be the problems?

- Students encountering this kind of approach for the first time can find it very stressful and as with many other innovations it's always a good idea to give them stress-free rehearsals in advance. Because this is an assignment that requires interventions in real time, if students miss the assignment in the first place they will required a re-sit opportunity; but these problems are not insurmountable. For example, in a resit the initial dossier can remain the same, but the intervention can be a different one of an equivalent level of difficulty

- If the in-tray exercise takes place over a number of days, as with all takeaway papers, students can feel very stressed and not feel they have time to go to sleep or attend to personal care and responsibilities. This can be remediated by assigning each student a notional workload budget within that period of say, 15 hours over three days, so that students have a realistic idea of what is expected of them.

Putting this method into practice

- Be prepared: The most substantial part of this work is putting together the dossier of papers to make sure that it is realistic and manageable by both staff and students. This may be time consuming so it's better to work on assembling documents over a period of time rather than simply aiming to do it at short notice

- Provide practice runs: show the students an example of how this works in practice in an interactive environment so that students don't see it as a major hurdle, but have an opportunity to ask questions in a formative experience where marks don't count

- Plan ahead for resits and reasonable adjustments: these are better considered and designed in advance of the live activity than addressed subsequently.

11 Live brief or 'triple jump'

What are they?

This is an assessment exercise, often used in the context of professional courses, which comprehensively measures the knowledge and problem-solving approaches that underpin Problem-Based Learning (PBL). A relevant problem from the professional area is presented to students, often using a role-play approach (e.g. a site visit or clinic) which requires students to go through three steps, typically:

1. Meet the client to establish the situation and ask any pertinent questions.
2. Go away for a specified amount of time to work on the issue, using appropriate resources.
3. Return to the client and present recommendations (Arnold, 2021).

What are the benefits?

- In PBL, students learn about a subject by working in groups to solve open-ended questions, as opposed to traditional classroom or lecture-based teaching. PBL encourages a deeper understanding of material because it uses problem scenarios to stimulate problem-solving activities, so that students are assessed on the knowledge they develop through the process and on the problem-solving methods they employ to acquire it. The 'triple jump assessment' thus assesses not simply what the students have learned but also how they learned it

- The 'triple jump' can boost a sense of authenticity in assessment by resonating strongly with the types of problems graduates encounter in professional and clinical settings, which demand researching unknown areas within time constraints and finding solutions by applying problem-solving skills.

What can be the problems?

- Sometimes students don't believe that the 'triple jump' is truly authentic in terms of actual professional practice, and so the main purpose may get side-lined if students place all their energies in narrowly solving the problem at hand

- Some students may be overly concerned by this novel way of being assessed and worry they don't know how to tackle it. Some may be daunted by the wide-ranging nature of the possible problem topics they might be required to face.

Putting this method into practice

- The problem needs careful formulation, so that it is open and has multiple ways of addressing it productively rather than requiring a single convergent answer

- To allay students' anxiety about tackling the assessment format, it can be helpful to go through the 'triple jump' procedures well in advance of the summative assessment, ensuring that learners see that the three steps taken on the assessment day closely align with the ways in which the problem-based learning process has been organised throughout their PBL course

- It's important to put students at ease if they are concerned about the wide range of unknown problem topics they may have to face on the assessment day, by helping them collectively brainstorm a series of likely topics in advance

- Clear and consistent messaging about the ways in which the learning, teaching and assessment methods resonate strongly with the types of problems and issues they will encounter in future professional practise is key to emphasising the relevance and meaningful nature of the 'triple jump' assessment.

The problem needs careful formulation, so that it is open and has multiple ways of addressing it productively rather than requiring a single convergent answer.

12 Open book or Open note exams

What are they?

In these exams, students can take resources into the exam hall to use. This can be either specified texts or notes (such as agreed textbooks, notes created during live seminars, specified databases etc.) or any other materials they choose.

In practice, many HEIs used what they commonly called 'open-book' exams during Covid, but these were often simply about placing the pre-planned exams online so they could be undertaken remotely, frequently with longer time allocations. Questions had normally been designed for use in invigilated settings, often relying heavily on memory and recall, and were not adjusted for the changed exam conditions. Also, students' familiar revision strategies sometimes didn't equip them to tackle the novel assessment format. To work effectively, open-book exams require rather different question-setting and student preparation.

What are the benefits?

- Without reliance on memorizing, the focus of student activity moves from recollection to usage of information, so the open book and open note formats are potentially much more like the kind of task students will encounter once they graduate. They encourage students to make connections across the curriculum in their revision, by summarising and indexing curriculum content rather than just learning what they can by heart
- Often open-book exams require fewer 'reasonable adjustments' for students who need these than in traditional invigilated exams, because they tend to be less stressful and generally more accessible

> *Open book exams require appropriately designed questions that don't over-rely on memory and recall, but instead on interpretation and analysis. So, for example, students can be given case studies to explore, and real-life data to analyse.*

What can be the problems?

- Designing good questions for open-book exams is quite different from designing traditional exam questions, and is a skill that staff need to practise and share to develop fully
- The tight time-limit compared to a standard written at-home assignment can still be hugely stressful for some students, so they might also need support in writing under very tight time constraints (see Webster and Crow, 2020)
- Some students rely on tried and tested revision strategies, which don't stand them in good stead for the open-book format, which requires them to apply (rather than just recall and regurgitate) knowledge.

Putting this method into practice

- Open book exams require appropriately designed questions that don't over-rely on memory and recall, but instead on interpretation and analysis. So, for example, students can be given case studies to explore, and real-life data to analyse (which will need reviewing if you use the same material in future years)
- Students need briefing and encouragement to prepare appropriately, especially those who tend to 'cram' for exams or may plan to simply wade through unrealistic amounts of reference material in the exam itself. We therefore need to help them to develop a good working knowledge of the material that the exam will cover, encouraging them to look back over their notes, lecture slides, and textbooks, and identify the themes, then prioritise what they need to take in with them. It's helpful if we can prepare them to think about key concepts and how they relate to each other, by, say, creating a mind-map, a spider-diagram, a bulleted list with sub-bullets, even a series of doodles and sketches, together with a simple index so they can quickly find what they need in the exam
- Students are likely to need guidance on what referencing standards you require: those as used in a traditional exam (i.e. barely at all) or full references as required in a standard assignment

13 Oral assessments and vivas

What are they?

In the UK and many other nations oral assessments are often limited to postgraduate level, for example, in the PhD viva, or specific subjects such as Law, but in many other nations particularly in Scandinavia and Northern Europe, they are commonly used at undergraduate level. This method encompasses not only oral presentations which can be virtual or live but also dialogic opportunities where are students asked to respond in real time to questions asked by the examiners.

What are the benefits?

- Oral assessment tends to be an authentic method of checking students' understanding in a live setting, with the added advantage that it is difficult to plagiarise or outsource
- Effective oral communication is a core graduate skill likely to be useful to students in subsequent personal and professional lives. In particular, the ability to respond to probing questions with confidence emulates situations that they are likely to encounter in their working or civic lives. Where students are being asked questions, their responses can enable assessors to gauge the depth of their understanding (Joughin, 2010).

Introducing oral assessments within a programme should be undertaken incrementally to ensure that confidence is built up through practice.

What can be the problems?

- Assessing large numbers of individual students orally can be very time consuming and exhausting for assessors, and when students are assessed orally in groups there can be problems about enabling each student in a group to have an equivalent opportunity to do well

- For some students, oral assessment is really stressful, particularly students with anxiety issues and some who haven't had the benefits of school debating societies which hone these kinds of skills. They can become so focused on the process that they don't concentrate sufficiently on the knowledge they are showcasing in their oral assessments
- Some overconfident students may think that because it is oral rather than written, they can 'wing it' on the day and not prepare adequately
- Students with speech impairments may need reasonable adjustments to be put in place to enable them to show their best abilities, for example by allowing them to submit elements of their work by video, and then following up with questioning.

Putting this method into practice

- Introducing oral assessments within a programme should be undertaken incrementally to ensure that confidence is built up through practice. In practice runs, it may be helpful for students to be able to subsequently watch videos of their own performances in a supportive environment with peers to enable them to come to measured conclusions of how well they did and subsequently build on successes or make further improvements
- Timetabling oral assessment needs to be undertaken sensitively, keeping in mind that as assessors get tired their intra-assessor reliability may diminish, that is to say, their marks for equivalent work may vary over time
- It's important to keep either audio or video recordings of oral assessment occasions to ensure moderation and appeals can take place as necessary.

14 Objective Structured Clinical Examinations (OSCEs) and Objective Structured Professional Examinations (OSPREs)

What are they?

OSCEs/OSPREs are a valuable and authentic assessment approach which originated in medical and clinical settings but have subsequently been used in a wide variety of contexts including business programmes, policing, law etc. In a medical OSCE, students entering the exam room will encounter a number of stations at which they have to undertake a practical activity: for example taking a history from a role-playing 'patient', interpreting x-rays and so on. Each activity might take 5 to 10 minutes and students have to move on from one station to another when the bell rings. In this way they are tested on a range of high-level skills and competences within a fixed time limit, under supervision, with fellow students moving round the room at the same time.

What are the benefits?

- This is a truly authentic activity which can demonstrate not just what students know, but what they can do and how they behave in a professional context
- Assessors working in a coordinated fashion can mark this kind of activity at each station quite quickly, so long as detailed rubrics have been worked out in advance
- It possible to use this method formatively to generate feedback dialogues
- Because students are required to be present in person, this is an area not readily open to poor academic conduct

What can be the problems?

- Designing appropriate scenarios for this kind of test can be time-consuming, particularly the first time this approach is used. When the approach is used regularly however, this front-loaded effort is likely to diminish over time. Some aspects of OSCEs can be expensive, for example employing actors to role play patients, and to ensure set-up of other kit and materials
- The methodology can be daunting for students who have not encountered it before, and might find it stressful because preparation for it is likely to be rather different than straightforward revision for exams

> *Some universities like to award prizes to groups of students in a competition to create scenarios for OSCEs/OSPREs. This has the double benefit of giving assessors useful material for future years' assessments, and also helps students get inside the whole process, which is useful if this method is used in different levels of the programme.*

Putting this method into practice

- With the rest of the assessing team, it's a good idea to establish quite early how to match the tasks being set, with the learning outcomes students are expected to demonstrate. Some aspects of professional practice lend themselves very well to this type of assessment and others do not, so it's important that the team jointly create and review what the students are asked to do. It's a good idea to have a dry run with no students present to check out what could go wrong and to explore contingency plans from the outset
- Having thus created your assessment tasks for each station, it's a good idea to plan ahead how these can be modified for reuse in future years, and for occasions when you have to run resits
- Some universities like to award prizes to groups of students in a competition to create scenarios for OSCEs/OSPREs. This has the double benefit of giving assessors useful material for future years' assessments, and also helps students get inside the whole process, which is useful if this method is used in different levels of the programme
- As the methodology requires students to be present in person and to work in real time, a risk-free rehearsal would be a really good idea especially if there are feedback opportunities for students about how they had done and how they could maximise their subsequent performances

15 Patchwork assignments

What are they?

"The essence of a patchwork is that it consists of a variety of small sections, each of which is complete in itself, and that the overall unity of these component sections, although planned in advance, is finalized retrospectively, when they are 'stitched together'." (Winter 2003: 112).

Each 'patch' is carefully designed, as part of a larger pattern (as in a patchwork quilt), to act as a pivotal learning moment. Patchwork processes involve students in the ongoing and cumulative formative production of their materials, whereby meanings are linked and built by the student over time. Patches are ultimately 'stitched together' to produce a fully-justified summative account, which is submitted for marking. Patchwork assignments differ from portfolio assessment by consisting of something with an obvious coherence, whereas portfolios can readily contain a diverse collection of more disparate elements.

What are the benefits?

- The real value of patchwork texts is that they take account of the different ways students learn and are able to express their learning in various ways thereby fostering continuous development and application over time. This method allows for diversity: enabling students to meet relevant learning outcomes in a format of their own choosing, according to their own perceived areas of strength. Importantly, patchwork texts are always owned by the student, who selects, critiques and justifies the work, making it an authentic and inclusive approach to assessment. Feedback, reflection and development of evaluative judgment/metacognition are integral to the design
- A further benefit is that they allow for creativity and gradual development: the final synoptic 'stitching' patch encourages students to integrate their understanding of the whole module, or across programme of study

- Importantly they are highly amenable to digital production, which enables sharing, discussion, peer review and developmental feedback processes to be threaded throughout as part of a flexible and evolving process which can be responsive to change. They provide vehicles through which to extend personal, professional, and theoretical boundaries, hence the process can valuably be used to disturb assumptions about knowledge and how it can be applied to a real-life context/issue
- Like many of the methods outlined in this guide, because they draw on personal knowledge, they are therefore harder to plagiarise or farm out to essay mills.

What can be the problems?

- This approach can't simply be 'dropped in' as a replacement assignment as it needs to be fully integrated with pedagogical approaches, and implementation takes substantial and careful preparation in advance on your part to ensure that students form a sense of the pattern, pace and scale which underpins the whole process
- Again, students more used to conventional assessment methods may resist the process, as it is unfamiliar and less teacher-directed than traditional formats they're used to, so students are likely to need significant briefing and guidance on how to achieve what they need to do to succeed.

The real value of patchwork texts is that they take account of the different ways students learn and are able to express their learning in various ways thereby fostering continuous development and application over time.

Putting this method into practice

- You should start small if you're unfamiliar with the approach, and maximise advance planning, including checking out whether suitable technological infrastructures and systems are in place so you can troubleshoot them with regard to your designs

- Front-ended effort involving initial briefings, student preparation and preparatory workshops on reflective writing, peer review processes and appropriate skills development are essential, to build student confidence and appreciation of the process. It can be helpful then to show them some exemplars, so they can see what kinds of components you are seeking (e.g. press releases, letters of application, Q and A sheets and so on)

- It's a good idea to start by looking at the learning outcomes so you can carefully design the patches to link with them and articulate the skills you anticipate students will develop (e.g. synthesis, creative thinking, criticality). You will need to guide the overall synthesis clearly and engage students meaningfully with assessment criteria and standards

- A core element of this approach is how students can share and review each other's work, so it's a good idea to establish clear processes for sharing and reviewing each patch so feedback feeds forward to the next patch. You should tailor patch themes to authentic contexts e.g. consider professional practice from a client's viewpoint, create an information leaflet, critique an article from a professional journal, review current news items, analyse data (Arnold et al, 2009)

- You will need to think carefully about the timing of the patches and check the relevant logistics in advance, so, for example, you should ask whether there is an overarching theme to the 'stitching'? Do you anticipate students having free choice in all or just some selection of patches and content? It can be a good idea to decide core and optional elements in advance and to make these clear to students.

16 Posters

What are they?

Just as academics often present research/project outputs as posters at conferences, so also students can be asked to produce posters as assessment tasks. Often the brief requires students to create outputs that are A1 in size, combine image and text, are visually appealing and convey information effectively. Frequently hard copy or virtual posters are exhibited in an end of programme event, where live assessment can take place in potentially a collegiate and celebratory atmosphere. Students may be asked to stand beside their posters to answer questions about the content, or give a short 'pitch' about their poster, and this may form part of the assessment.

What are the benefits?

- Students can demonstrate additional skills when they are asked to create posters to showcase their work, and this is often regarded by them as a more authentic approach than producing formulaic reports
- It is usually much quicker for staff to mark posters than it is to mark lengthier written reports
- Students can peer review each other's posters, thereby enabling them to become familiar with the work others have produced as well as their own
- If poster displays take place in an open area e.g. the foyer of the building, it can showcase the kind of work students are producing for potential students, employers, family members and others

What can be the problems?

- If there is heavy weighting in the criteria on production values of the ultimate product, some students with better access to resources can produce glossier, more polished and expensively produced posters than those with less limited means
- High production values can sometimes skew marking by both peers and tutors unless the weighting for presentation is clearly limited
- Where posters are produced by groups of students, it can be difficult to ascertain the individual contributions, unless an element of peer assessment is used

- If the posters are in hard copy, display and storage can provide some logistical problems (although digital records can be kept)

Putting this method into practice

- When briefing the task, it can be helpful to show students a wide variety of examples from the previous year's students (if it's the first year of doing them, you may need to mock up a handful of exemplars). Use these as an opportunity for a dialogue about how different styles and approaches can equally produce good results. Ask them to think about the balance of text and image, the kinds of issues they might need to take into account to ensure inclusive approaches, and so on
- Posters can be used formatively as well as summatively. During virtual or physical class settings, students working in groups can be asked to produce initial results from their productive discussions using a poster, maybe using a sheet of flipchart paper on which they can collectively assemble their early thoughts for peer and tutor review, or virtually creating a poster in PowerPoint to be used similarly. Used summatively, they can be produced individually or by groups and marks awarded
- It's always best to introduce this kind of approach early in a programme, formatively, where students can play with the concept in a risk-free environment, especially if you plan to use it summatively later on, where the marks will count
- Many find that engaging students alongside staff in formatively reviewing the posters against the assessment criteria can help students really engage fully with the criteria when it comes to them producing their own summative outputs.

> *When briefing the task, it can be helpful to show students a wide variety of examples from the previous year's students (if it's the first year of doing them, you may need to mock up a handful of exemplars).*

17 Presentations

What are they?

Presentations provide an opportunity for students, individually or in a group, to present the outputs of research or other endeavours to an audience, which may comprise lecturers, peers, potential employers and others. It's a crucial graduate skill, since many professions require the capability to give effective presentations, and it's also useful for active citizenship. Very often, providing appropriate visual elements, such as a PowerPoint presentation, and the ability to answer questions articulately and fluently are key elements of the assessment.

What are the benefits?

- On many programmes, a core learning outcome is the ability to present information orally in front of an audience and this provides an excellent opportunity for them to do so
- They are a highly authentic assessment for many students on professional courses who are likely to have to give presentations in their future work context, and they are also valuable for students as a demonstrable capability

What can be the problems?

- Students unused to speaking in front of others, and those who experience anxiety, may well find this method very stressful, unless they are given plenty of opportunities for risk-free rehearsals before the methodology is used summatively
- Sometimes students put so much effort into the presentation element that they fail adequately to prepare the content
- Unless the duration of the presentations is tightly constrained, the assessment of them can be very time-consuming. If students are involved in assessing their peers, and if they are asked to watch too many presentations, they may become restless and attention may wander
- If students are assessed in groups rather than individually, there can be some problems about enabling each member of the group to contribute equally. This is particularly the case if the presentations are relatively short and the criteria include the oral elements of the presentation, requiring each student to speak

Putting this method into practice

- During the pandemic, many universities asked students to give their presentations virtually via Microsoft Teams or Zoom, and although face-to-face presentations are likely to still be important, it's valuable to include at least some elements of virtual presentation in a programme
- It's important that the briefing contains an opportunity to discuss the criteria and their particular relative weightings, so that students don't over-focus on a single aspect, such as creating professional specification audio visual aids, unless that is one of the criteria
- Where students are participating in peer review of each other's presentations, it is imperative that there is discussion in advance of what comprises (and does not comprise) acceptable feedback on performance
- Where students are being assessed in groups, it's crucial to have relatively small group sizes and to allow sufficient time to enable each student to speak, where there is an oral component in the assessment
- Whether the presentations are live on-campus or virtual, it's important to keep recordings of the presentations for further scrutiny by external examiners or in the case of appeals
- If you are assessing presentations throughout a programme, it's a good idea to adjust the assessment criteria as students move through the different levels of the programme so that they can demonstrate improved mastery of oral and presentation skills

Where students are being assessed in groups, it's crucial to have relatively small group sizes and to allow sufficient time to enable each student to speak, where there is an oral component in the assessment.

18 Reflective Journals

What are they?

Reflective journals are often used to enable students to demonstrate their capabilities in applied contexts, for example, while out on placement or on a year abroad or in industry. They tend to be more useful than simply asking students to create and then submit a log or a journal, because the process of reflective journaling helps to build students' analytical and metacognitive skills and thereby deepen their learning.

What are the benefits?

- This is a very authentic method that is widely used as a means of accessing what happens to students in the parts of the programme that are normally unseen by members of staff, particularly student responses to what and how they are learning
- It is rare (but not completely unknown) for students to plagiarise or outsource other people's reflections
- If reflections are kept in a repository that can be accessed by students over time, it can be a useful cumulative resource for students to refer to towards the end of the programme and even after they have graduated.

What can be the problems?

- Unless you put strict restrictions on them, they can be highly problematic to mark if students submit extensive and unstructured thoughts
- Some students find the whole process very alien, particularly if they've worked previously on courses where all assignments were traditional written ones
- Some students who have complex domestic/social lives may find the process intrusive if they feel it is asking them to reveal too much of what they would prefer to keep private.

Putting this method into practice

- It's unreasonable to expect students to be reflective if you haven't had some dialogue with them in advance so they understand what you are looking for. For this reason, it's useful to hold a briefing session in which you provide examples from previous years' students' work, or staff-created mock-ups so they have an idea about the style, tone, register and format

This is a very authentic method that is widely used as a means of accessing what happens to students in the parts of the programme that are normally unseen by members of staff, particularly student responses to what and how they are learning.

- In such briefings it's important to open up dialogues about how confidentiality matters (for example, patient data) and how personal details should be treated in an assignment that is likely to be seen not only by the marker but also by other academics and the external examiner
- It's a good idea to provide a framework for students' reflections which allow them to write a limited number of words (say 100) on each of the following headings:
  - Title
  - What was the context?
  - What did you actually do?
  - What was your rationale for doing what you did?
  - What literature did you use to underpin your actions? Please give full citations.
  - What were the outcomes?
  - What would you do differently next time?
  - What did you learn about yourself from this experience?
- It's particularly useful to give a framework like this for students undertaking their first reflection in a programme, but maintaining a fixed structure with restricted word counts is beneficial even towards the end of a programme.

19 Simulations

What are they?

In some kinds of simulations, students are given a variety of documentation, often in the form of case studies, with which they have to engage and then undertake activities to demonstrate their understanding and effective usage of the material. For example, the Harvard Case Method has since the 1950s been very widely used in Management programmes, where a written description about a real company facing specific business problems is discussed, often in large groups of students, prior to forming the basis of an individual written assignment (Bennett, 1976). In other kinds of simulations, pre-qualification surgeons, for example, are asked to use remote surgery equipment in virtual settings, enabling them to practise prior to them using this equipment with live patients under supervision. Similarly, pilots learning to fly new planes use simulators to enable them to become familiar with equipment they will subsequently use, alongside a more experienced pilot.

What are the benefits?

- Simulations can provide safe occasions to enable novices to gain confidence and expertise in life-emulating contexts, making this an authentic and valid assessment method in subjects where high order cognitive skills need to be combined with practical capability
- They are very widely used across disciplines as being a highly authentic assessment format that gets students to use and apply information meaningfully

What can be the problems?

- Whether you use a Harvard-style case study or a sophisticated technical simulator, simulations require a very high level of planning and organisation to set-up in the early stages
- If simulations materials are purchased, they can be expensive but can be used cost effectively by large numbers of students
- Simulations are likely to need regular modifications and updating to ensure they remain relevant and appropriate, particularly as they tend to be used in subjects where high rates of change are common

Putting this method into practice

- Your key starting points should as always be the learning outcomes so you can clearly decide what particular skills capabilities and professional behaviours you are setting out to test
- For paper-based scenarios, it's rarely a good idea for individuals to create these alone because a team of assessors working collaboratively is more likely to create more sophisticated and testing base materials
- Simulators for assessing advanced technical skills will need advanced technical design teams to create and test them out, and ensure they work fairly and validly as assessment methods, exactly emulating the actual equipment professionals will use in live contexts

Your key starting points should as always be the learning outcomes so you can clearly decide what particular skills capabilities and professional behaviours you are setting out to test

20 Teaching packages

What are they?

Asking students to design teaching packages can be an excellent, flexible way to allow them to demonstrate their deep understanding of a topic, through producing descriptions and outlines in layperson's language that can be used by people less expert than themselves. For example, you could ask students to produce a rough guide, infographic, graphic novel, video, explainer, diagrams with exploded text, workshop guide or instruction manual, which educates a specified audience about a complex topic. You can use them to get current students to help future students on the same programme to avoid common errors or misconceptions.

What are the benefits?

- Students can often see the point of preparing outputs which have the potential for actually being used by the target group, as opposed to jumping through assessment hoops simply to please a marker. Where these are applied (e.g. as a guide for fellow researchers, professionals, 'Higher' or 'A' level students, or members of the public etc.) these can be highly motivating. They are likely to be able to clearly see how the learning outcomes in the programme guide clearly link to these assignments, thereby enhancing their meta-learning skills
- It's also valuable that they can demonstrate communication skills that go beyond text, creating diagrams, tables and instructions as well as audio visual elements
- A principal benefit to using this approach is to provide dialogic feedback opportunities for students to discuss the resources they are creating with peers and tutors, helping to promote and foster collaborative, asynchronous approaches (live or online). Because of the nature of the assignments, they are less likely to plagiarize or farm their assignments out to essay mills.

What can be the problems?

- Students can get carried away using some of the creative tools and with the novelty of the format, so supportive guidance is important to keep them focused on the task in hand

Students can often see the point of preparing outputs which have the potential for actually being used by the target group, as opposed to jumping through assessment hoops simply to please a marker.

- Students may not at first realise how much work is needed to prepare for, plan and deliver a seemingly informal output like a broadcast and may consequently leave it up to the last minute; or conversely, they may concentrate so much on the medium that they neglect the message
- There can be technical issues for inexperienced students about creating resources and substantial problems may arise with some students having significantly better access to good quality kit than others.

Putting this method into practice

- Students will need to be briefed well, ideally by giving them examples to review from previous students' work (with their permission), or alternatively staff-created exemplars so that they can see what is expected of them
- Students can be required to submit assignment checklists which help them to consider the key features you are looking for. Generating these in advance in dialogue with the teaching team will help to ensure staff have shared expectations and standards
- Involve students with co-creation or active interrogation of the assessment criteria so they are clear about the standards, meanings and relevant weightings of criteria, and can use them to evaluate their own work in progress
- Guide students towards resources that can help them ensure their resources are inclusive and accessible to the target audience, be it researchers or schoolchildren.

21 Two-Stage Exams

What are they?

Two-stage exams allow students to undertake exam questions individually, but once they have handed in their exam papers at the end of the designated time, they move immediately into small groups. They then have a set period of time to work collectively on the same questions. The whole group must agree the group output, which they hand in as a single group copy, having added their names and/or student IDs to the second-stage exam paper. The students' first-stage paper usually accounts for a large proportion of the grade, but the second paper also contributes to each student's overall grade.

What are the benefits?

- The second – collaborative – stage of the exam provides students with the opportunity to review and deepen their learning about the academic work they have just undertaken while it is fresh in their minds. By discussing and working through the questions with fellow students, they engage in active learning and feedback processes which significantly boost their understanding of content, concepts and learning processes, as well as clearly highlighting the value of working productively with others
- With careful organisation two-stage exams can work well with large classes
- Pre-selecting groups to include a mix of high- and low-achieving students can be a beneficial approach.

What can be the problems?

- Students may be concerned about issues of fairness, and some may prefer to work individually even in the group-based second stage. To help address this, it is important to implement a clear policy that an individual's overall grade can't be lower than the mark awarded on the first-stage paper: it can only improve. It's also wise to hand out only one copy of the stage 2 exam paper per group to encourage consensus-building discussion

- Two-stage exams take a little more effort to organise and mark. However, in practice this is minimal because students have already seen and tackled the problems, so the time is spent in discussion, and there are fewer scripts to mark at stage two, at which point many errors will already have been ironed out

Putting this method into practice

- Two-stage exams work best with multiple choice questions or problem tasks but not with longer essay style questions or lengthy calculations, as it's necessary to set types of questions that are short enough or structured such that everyone can contribute
- It is important to brief students very clearly so that they appreciate the evidence-based educational benefits and also understand that in practice most groups perform equally or better than individual students
- You should assure students their overall score will not go down through this process and clarify that the majority of the exam score will be given for the individual part, for example, using a weighting of 85% for the individual portion, and 15% for the group portion
- Good organisation, preparation and co-ordination amongst facilitators/invigilators is imperative. The switch between stages can be done in under five minutes as long as you have one facilitator per 50 students, and the two-stage format can be administered in the usual exam time-slot, if you allocate about two thirds of the time to stage one and one third to stage two
- You can, of course, harness the demonstrable learning benefits by using two-stage exams formatively as class quizzes (without the grading element).

The second – collaborative – stage of the exam provides students with the opportunity to review and deepen their learning about the academic work they have just undertaken while it is fresh in their minds

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