Alternative Assessments

Background
There are a variety of commonly utilized traditional assessment methods – such as exams, quizzes, papers, projects – used to capture information about student learning. Rethinking what and how you assess student learning in general or identifying methods suitable for changing course contexts, creates an opportunity to consider alternative assessments.

Alternative assessments are worth considering under the following circumstances:

- traditional methods are not sufficient to capture necessary information;
- a method you are using works well, but does not scale well to accommodate larger class size;
- an attempt to translate a successful method to the online environment did not work as planned;
- one goal of taking a course online is to implement new tools for assessment.

Note: Whatever methods of assessment are utilized, instructors are encouraged to include information in the assignment instructions clarifying the advantage the selected method offers toward helping students achieve the learning outcomes.
Bloom’s Digital Taxonomy can assist instructors with thinking about what sort of technology tools can support facilitating student achievement of learning outcomes.

Infographic Credit: Ron Carranza
https://teachonline.asu.edu/2016/05/integrating-technology-blooms-taxonomy/

If you are looking for alternative methods to utilize in your online course, see below.
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Presentation (via ZOOM)

Presentations can be done easily in Zoom. Below are two helpful links explaining how students could do group presentations in breakout rooms, record those presentations, and then upload them for instructor viewing and/or grading.

Basic overview - In Zoom, the host has to give participants permission in Settings to record while in the breakout room. One participant initiates the recording once the breakout rooms are started. The participant records locally to their computer and then shares the file (using the predetermined process – e.g., upload to YouTube and share the link, etc.).

Zoom’s Participating in Breakout Rooms

Penn State’s Zoom: Allow Participants to Record Breakout Rooms During a Meeting

Advantages: Familiar face-to-face assessment method can be conducted in online environment.

Challenges: Possible technical difficulties.

Faculty Observations (via ZOOM)

- Applicable to clinical demonstrations, oral exams, and presentations in the online environment.
- Providing feedback is facilitated through a grading rubric that articulates what knowledge and skills are being evaluated by defining levels of proficiency.


Advantages: Familiar face-to-face assessment method can be conducted in online environment, useful across disciplines, supports “W” and “C” courses.

Challenges: Same as face-to-face—requires scheduling time with individual students or groups of students.
Quizzes and Exams

- Quizzes can be automated in eCampus.
- Exams can be administered in eCampus and proctored in Zoom.
- See Exam Options on the Keep Teaching website.

Other options:

Allowing students to take a quiz multiple times to secure a perfect score can assist their learning. This method works well if there is a test bank with a variety of questions supporting the quiz.

A series of quizzes can be used in place of a major exam. This gives students time to correct misconceptions and build knowledge through the series.

Consider open book exams if they are a reasonable option for your course. For example, if it is important to assess student ability to locate information quickly or find information and apply it to solve a problem – a non-proctored exam may work well.

**Advantages:** Supports increased low-stakes assessment for learning using quizzes without increasing grading load, allows for a series of low-stakes assessments in place of fewer high-stakes opportunities which can reduce student anxiety.

**Challenges:** Need to create quiz questions if “bank” does not already exist, potential technology challenges.
Journaling or Self Reflection

DEAL structure (Describe, Examine the experience, Articulate Learning)
https://drive.google.com/file/d/1UvtGhQCPvOcI5ZX0EIJNjTFjznNyCz36N0/view?usp=sharing

More on journals and reflection for learning:


Example - Course Journaling https://www.insidehighered.com/advice/2019/06/25/how-teach-more-effectively-through-course-journals-opinion


Importance of Context: Transparency in assignment description – tell students why is assignment or material is significant for their learning. If reflection is an expectation but not evaluated, students may think it does not matter.

Assessment:

Create and share rubric (AACU - https://www.aacu.org/value-rubrics)

Reflection may be assessed by self or peers – also using a rubric

For low-stakes use of journaling – consider using a 3 point scale: 0: did not submit or low effort, 1: submitted and meets criteria, 2: submitted and goes above criteria

Concept maps can be an element of journaling

**Advantages:** Engages students in reflecting on their learning, provides evidence of their learning, opportunity for creativity and problem-solving, applicable across disciplines.

**Challenges:** Grading time may be prohibitive in large sections - consider spot grading for content to inform general feedback to the class while awarding completion points to all students who submit.
Laboratory Report

If lab research, including data collection, has been paused a video of the lab and/or data may be provided for the lab report.

Students can be asked to:

- Develop and expand hypothesis/hypotheses
- Identify supporting literature
- Discuss methodological approach. Potential to compare and contrast on why the methodological approach was ultimately selected.
- Analyze a provided data set (if proper analysis equipment is available)
- Identify and/or use a relevant secondary or open data source

Idea: Make this an opportunity for students to submit abstract or shorter reports and be blind peer-reviewed, mimicking the process and communication of journal submission. Instructor could serve as ‘journal editor.’ Provide a rubric to focus their efforts on elements of the assignment critical to their learning.

Advantages: Continues student engagement with key practices and skills, potential group assignment.

Challenges: Managing grading load - consider having some activities as group assignments.
Essay Sprints / One-Minute Essays

These short writing activities typically last for around one minute and have students answer a question, respond to a series of questions, or provide feedback on a specific part of the day’s lecture content and/or activities.

They are typically done at the end of a segment of a lecture segment, activity conclusion, or class period.

They are a good way to measure student understanding and can help instructors know if students really are learning the course material at the level they should be.

These activities are very customizable and adaptable and require students to organize their thinking, analyze and apply what they have learned, and synthesize an integrated response.

Other helpful resources and guides can be found at the following links:

https://www.rochester.edu/college/cetl/faculty/one-minute-paper.html
https://provost.tufts.edu/celt/files/MinutePaper.pdf

Advantages: Engages students in reflection and writing to learn.

Challenges: Managing grading load - consider pairing with peer feedback and evaluation process which can also increase learning.
Papers

Papers can take many forms including analysis papers, reflection papers, or research papers. Having students engage in the entire writing process in graded stages can help students become stronger writers and can help keep them from becoming too overwhelmed with the writing process.

Students also get credit for work they complete along the writing journey, rather than one large grade at the end. This encourages students to learn from their mistakes and practice/improve their writing skills, resulting in a better final product.

A common approach to staging the writing process:

- Annotated bibliography to help students with their research skills
- Abstract or executive summary
- Outline
- Multiple drafts etc.

Instructors can choose to have students use peer evaluation at different stages of the writing process. Peerceptiv is an automated cloud-based platform that allows students to peer review each other.

https://it.tamu.edu/services/academics-and-research/teaching-and-learning-tools/peerceptiv-peer-review/

Providing detailed rubrics for students is essential so that they know instructors’ expectations and what exactly the paper assignment entails. Resources on rubric creation can be accessed at the following links:

https://www.cmu.edu/teaching/assessment/assesslearning/rubrics.html
https://www.brown.edu/sheridan/teaching-learning-resources/teaching-resources/course-design/classroom-assessment/grading-criteria/designing-rubrics

Paper alternatives:

- Fact sheet
- Infographic

Advantages: Engages students in writing to learn, develops essential organization and communication skills

Challenges: Managing grading-having components of assignment due over a few weeks instead of all at once distributes grading and increases quality of final product, consider incorporating peer feedback opportunities, consider Peerceptiv
Peer Feedback and Evaluation

Peer feedback and evaluation allows students to learn from each other. It encourages preparation, requires participation, informs reflection, and increases accountability. Designing an activity for peer feedback and evaluation includes:

- Instruction specific to the knowledge and skills that will be assessed
- Definition of student role and responsibilities in peer feedback interactions
- Creation of a rubric that guides students through the feedback process on demonstration of knowledge/skills and interactions with peers

Provide a rubric for peer review that clearly describes focus areas for reviewers.

- What are the key elements in the paper, presentation, problem, project, etc. that determine the level of mastery demonstrated by the student doing the work?
- What are the key benefits reviewers need to take away from the process of reflection and review?

Resource: Peerceptiv is a platform that supports peer review

Resource: http://www.lrdc.pitt.edu/schunn/research/peers.html


Advantages: Allows students to compare their thinking with that of peers, encourages reflection on learning, creates an additional set of data for evaluation of mastery.

Challenges: Requires management through creation of rubric and articulation of roles/responsibilities to manage process.
ePortfolio

EPortfolios are best known as collections of artifacts from a semester or an entire program demonstrating student learning progress. A shorter “micro” ePortfolio focused on specific student learning outcomes can be used for assessment over a portion of the course.

Resources:

Developing an ePortfolio - https://drive.google.com/file/d/1Q-sYlgcykIhVi4hxZcTLuDmuXlFAIcM/view?usp=sharing

Advantages: Students and instructors can track development of proficiency over time.

Challenges: Identifying format of platform for storing and displaying work online. Consider if display option needs to be sustainable and accessible to potential employers.
Video Projects or Digital Storytelling

Video Projects - just as instructors can, students can also use Zoom to record themselves presenting asynchronously to then share with the class or with the instructor using a predetermined submission process. It is a good idea to provide students with a video time limit, as well as other video expectations, when introducing the task. Ideas for video project prompts (also see ideas in the Academic Integrity section of Keep Teaching):

- Have students explain a common disciplinary misconception
- Have students teach a concept
- Have students work a problem and explain the steps they used
- Have students reply to an instructor-provided prompt

Digital storytelling

- What is a digital story and how does one get started?
- Step-by-step tips for creating a digital story
- Storytelling can be done easily in PowerPoint

Story Mapping

What is a story map? A story map is more than just a map, quick social media post, or great photo. Rather, it’s a way to reflect and communicate in an organized, detailed, and most importantly, a professional manner on your project.

Templates: https://storymaps.arcgis.com/en/app-list/

Example: https://pow.maps.arcgis.com/apps/Cascade/index.html?appid=e3f58c2ca0dd4d389114f454536437c3

Tutorials:
https://www.youtube.com/watch?v=Fi63TOP7Vxo
https://storymaps.arcgis.com/stories/cea22a609a1d4cccb8d54c650b595bc4

Advantages: Creative approach, allows students to develop valuable skills.

Challenges: Comfort level with technology, managing grading load for large sections.
Concept maps

Concept maps are a versatile tool that students can use in small groups, individually, as part of an ungraded class activity, or as part of a graded assignment.

They are visual tools that encourage students to brainstorm, to connect concepts and content, and to analyze and apply the material they are learning in the course as a whole.

Reflections on learning can done as concept maps.

Concepts maps can be used in partial notes for students to complete while viewing micro lectures, reading, or participating in class session.

Resources - Concept Mapping Tools:

- https://www.mindmeister.com/
- https://cmap.ihmc.us/

Resource - An overview of concept maps including their benefits and efficacy can be found here: https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/educational-technologies/all/concept-mapping-tools

Advantages: Encourages learners to think visually and verbally about how concepts are related, some instructors report they can be assessed for grading quickly.

Challenges: Requires that students use an online platform to create or draw by hand and submit a photo.
Other helpful resource links for alternative assessment formats:

https://cei.umn.edu/support-services/tutorials/integrated-aligned-course-design-course-design-resources/alternative

https://www.ryerson.ca/content/dam/learning-teaching/teaching-resources/assessment/alternative-assessments.pdf

https://citl.indiana.edu/teaching-resources/assessing-student-learning/alternatives-traditional-exams-papers/index.html

https://teaching.berkeley.edu/resources/improve/alternatives-traditional-testing

https://sasoue.rutgers.edu/teaching-learning/remote-exams-assessment#10-alternatives-to-exams