

PEDAGOGICAL STRATEGIES FOR ALTERNATIVE ASSESSMENTS

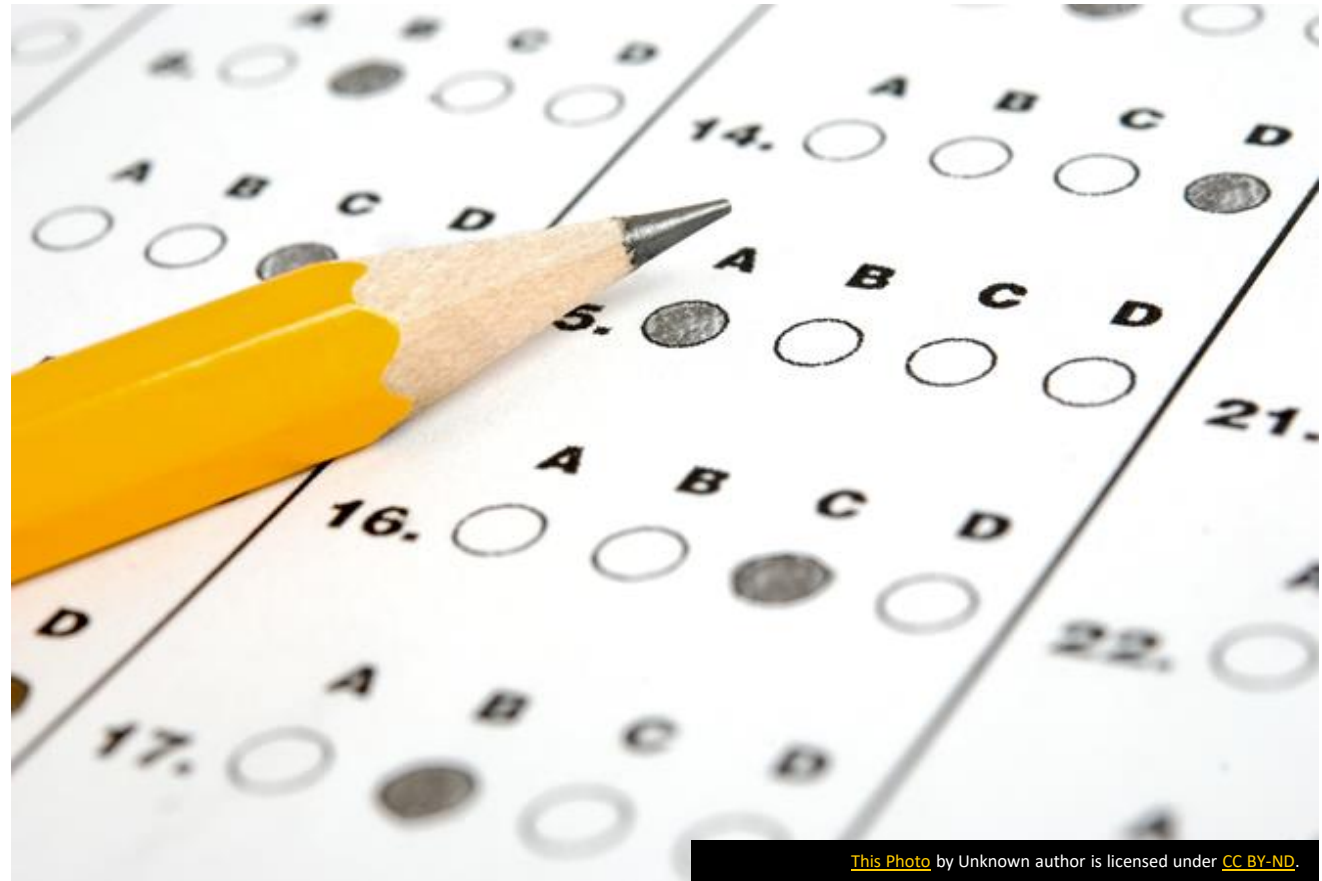
Dr. Samantha Clifford
Instructional designer
NAU Online



ALTERNATIVE ASSESSMENTS OVERVIEW

Specific strategies:

1. formative assessment,
2. student generated content,
3. peer and self-review,
4. specifications grading,
5. effective feedback



5 CONSIDERATIONS FOR DESIGNING EQUITABLE ASSESSMENTS

1. **Align** learning activities, learning objectives and assessments.

2. Include **rubrics** as part of the assessment.

3. Provide **variety** and multiple ways to demonstrate learning.

4. Build in **time** for students to practice, reflect, and apply learning.

5. Employ frequent, timely, positive **feedback**.

START WITH TRANSPARENCY

PURPOSE: Describe the knowledge and skills students can expect to gain/hone.

How do these relate to other topics?

How are these relevant for students?

What will students practice while doing the assignment/assessment?

TASK: Clearly communicate steps students ought to take to complete the assignment/assessment.

What are the common pitfalls that students encounter with this assignment?

Are there opportunities for students to get feedback on parts of the assignment before the larger assignment is due?

CRITERIA: Before the assignment is due, share the rubrics or checklists used to evaluate the work.

Are there examples of work that meets those expectations and an example of one that does not?

Are there opportunities for students to evaluate their own work or other student work using the rubric or checklist?

Adapted from resources developed by Mary-Ann Winkelmes. You can read more about transparency here: <https://tilthighered.com/>

FORMATIVE ASSESSMENTS

Goal- ***to monitor student learning*** and provide ongoing feedback to improve learning.

- Help students identify their strengths and weaknesses to target areas that need work
- Help faculty recognize where students are struggling and address problems immediately
- Generally *low stakes*, (low or no point value)

Summative Assessments

Goal- to evaluate student learning ***at the end of instruction.***



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EXAMPLES FROM YOUR NAU COLLEAGUES

3 Minute Presentation

Goal: Students can demonstrate their understanding of course concepts and critically evaluate environmental messages.

- 1. Students complete reading summaries.*
- 2. They present (and submit outlines) for 3 minutes demonstrating their understanding and ability to apply a concept of their choice (e.g., an ad or music video).*
- 3. Multiple presentations over the semester allow students to practice and gain feedback.*

Richard Rogers- School of Communication

3 Minute Message

Goal: To help students see the modern relevance of learning about human evolution, evolutionary processes, or primates.

- 1. As a closing technique for class, students create a 3MM to synthesize the material and explain it to someone else.*
- 2. All messages are available online and students vote for the most effective message.*
- 3. The top 5 are shown during next class. Students complete a reflective assignment where they answer:*
 - How does the explanation help us understand the topic in a broader societal way?*
 - How does this material relate to you and society in a relevant way?*

Corina Kellner- Department of Anthropology

REPLACING MID-TERMS WITH BIWEEKLY LOW-STAKES QUIZZES.

The experience of moving online last semester helped me improve the structure of my course. I re-arranged the information by week which allows for 7 biweekly quizzes out of which 1-2 could be dropped.

I can make the overall value of the quizzes worth the same as the midterm.

Ana Araya Anchetta –Biology



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BUCKET OF FUN (GLENN'S TERM)

Description: Typically, skills are written on a piece of paper and put into a cup. A skill is drawn for each student and immediately, the student demonstrates/performs the skill in front of the class. If they are stumped, they may ask questions.

- 1. NAUFlex: Remote students can describe their actions if they cannot perform the skill on another person.*
- 2. ALTERNATIVES: Create scenario based questions that require students to explain how they would handle the scenario (what questions they would ask, what tests they would perform, etc.)*
- 3. OPTIONS: Math could have equations in the bucket, chemistry could have problems, ideas, and terms in the bucket, history could use dates or events based on unit materials and ask students to explain what happened on those dates or what the event was all about, etc.*

Glenn Edgerton, Program in Athletic Training

ZINE AND CONTEMPORARY JOURNAL

Students create zines, translating the ideas from readings and discussions into digestible information to share with the public. The zine idea will be combined with the contemporary issues journal idea so that the zines also engage directly and explicitly with world events.

Nora Timmerman- Department of Sustainable Communities

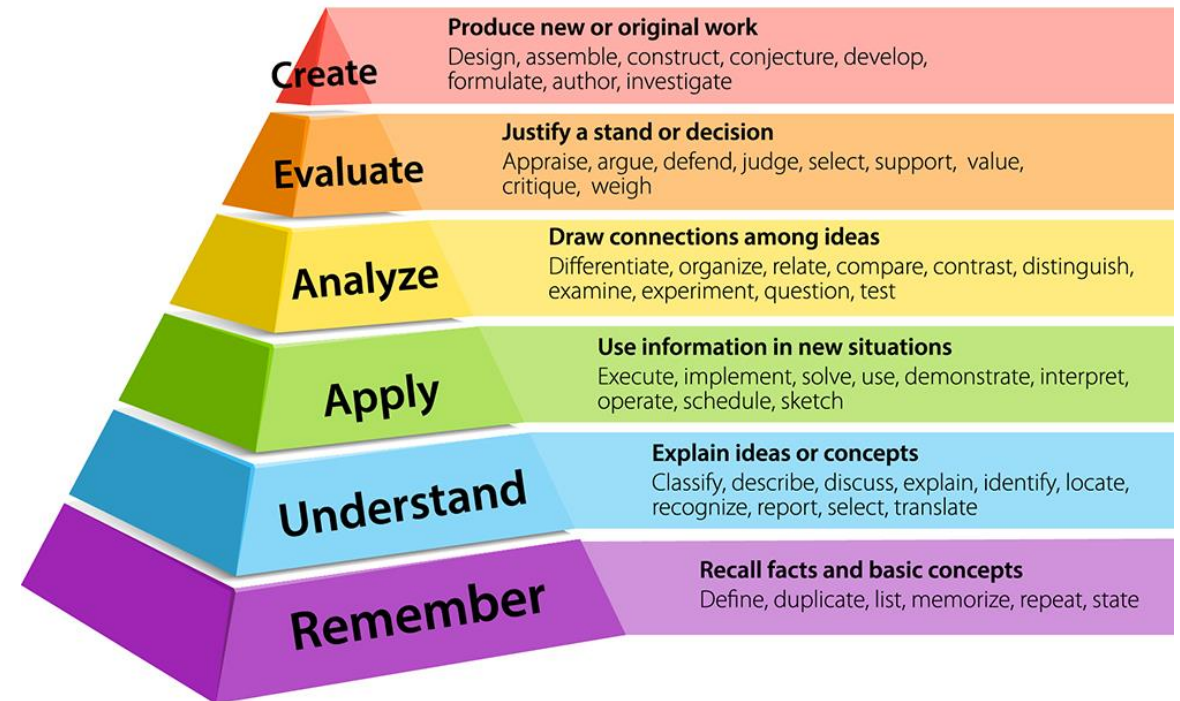


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HOW ELSE CAN STUDENTS DEMONSTRATE THEIR LEARNING?

- A poster/concept map/diagram
- A research bibliography
- Suggest their own project or choose from a list
- A collaborative quiz
- An open notes quiz to encourage note taking skills
- A muddiest point after class
- A 1 page fact sheet: students compose relevant facts on a topic and explain them clearly and concisely.

Bloom's Taxonomy



STUDENT GENERATED CONTENT

MORE EXAMPLES FROM YOUR COLLEAGUES



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INVENT THE QUIZ

Goal: Writing quiz questions builds and demonstrates students' understanding of the material.

- 1. Students work in random groups.*
- 2. To prepare for an upcoming quiz, students meet outside of class and collaboratively write quiz questions.*
- 3. Groups share their best questions during the next class.*

Todd Johnson- W.A. Franke College of Business

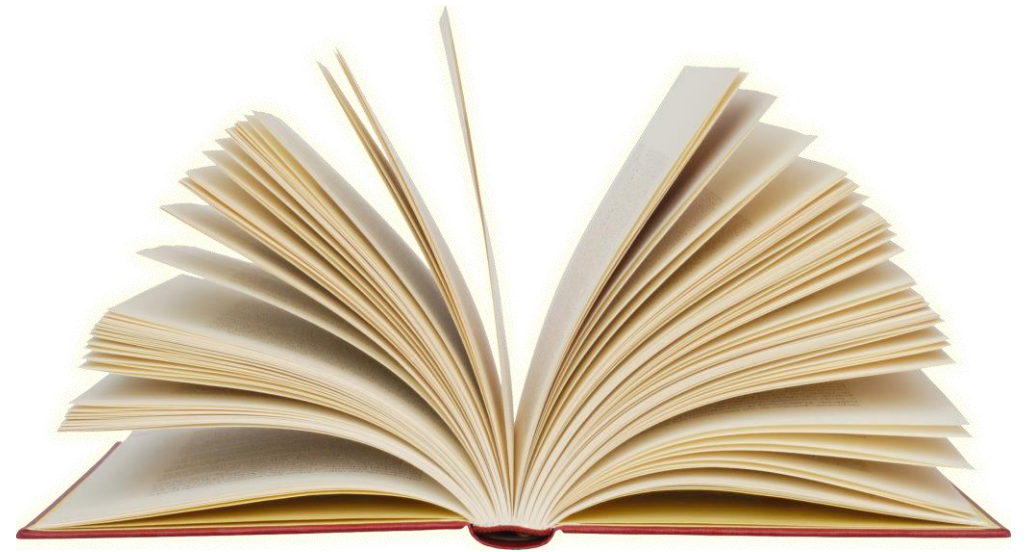


POSTER VARIATION- LOOK BOOK

Goal: Rather than a short paper, students create a visual tool used to pitch an idea for a film using images.

- 1. Students learn how theater action and film action are staged differently. The basis for visual composition includes identifying the guiding items in the frame.*
- 2. Students find and post a series of images to demonstrate how the eye moves first to the most dominant element in the frame and then to subsequent images.*

Paul Helford- School of Communication



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COMPREHENSIVE FACTORS LIST- CIRCLE MAP

Goal: Students interpret state standards as a precursor to writing lesson plans.

- 1. Individually students compose a Circle Map with AZ State Standards in the middle;*
- 2. From memory, students add everything they remember about the standards;*
- 3. Students work in pairs to determine what was missed, included, and what each part means.*
- 4. State ELA Standards are posted on screen during the whole class discussion. Students identify the components of a standard and why standards are important for teaching.*
- 5. Lectures are recorded and optional makeup;*
 - Students create an info-graphic of an ELA standard. They take apart a standard explaining each part's meaning.*

Norma Zink- College of Education



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OTHER IDEAS FOR STUDENT GENERATED CONTENT



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- study guides,
- chapter highlights,
- test preparation checklist,
- notes with textbook references
- podcast interview
- infographic

PEER AND SELF REVIEW

- Allow for personal reflection of learning and peer-to-peer instruction.
- Assessing a peer helps students benchmark their work against the class.
- Clear instruction for providing constructive feedback and rubrics describing the expectations for student work are very helpful.
 - **Additive feedback- suggestions only about what the writer might add to or develop**
 - **Summary of main points and evidence**
 - **Provide a form for students to use to guide their comments**
 - **Offer grading criteria for peer reviews**

PEER REVIEW- SCAFFOLDING

Goal: To incorporate scaffolding into the larger assignment, allow for peers to benchmark themselves, and clarify questions about completing the final assignment.

- 1. Students submit work digitally to their partner.*
- 2. Peer reviewers complete a commenting form which provides clear guidelines to help students structure the feedback.*
- 3. Students edit their work and submit a draft to the instructor.*
- 4. Commenting forms are submitted to the instructor by the peer reviewer.*

Paulina Swiatkowski- School of Communication



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SINGLE-BLIND PEER REVIEW

Goal: Rather than write individual critique letters, students team up and draft collaborative single-blind peer reviews. The outcome is a collaborative conversation about craft, aesthetics, and narrative logic.

- 1. Authors are matched and collaborate via Google Docs.*
- 2. A checklist provides examples of useful feedback.*
- 3. After peer reviewers contribute to the document, the author edits the document.*
- 4. The review is submitted and graded. It is anonymously available to the author.*

Critiques are often hermetic, prone to confirmation bias, and labor-intensive. This adaptation will broaden perspectives, forge community, and lend itself to productive disagreement during the "reaction" phase of creating literary art.

Lawrence Lenhart- Department of English

PEER REVIEW AS PARTICIPATION

Goal: Traditionally, students upload their artworks to a google docs slide show. The slides play as a loop when students enter. It's exciting to watch their expressions and listen to them comment on each other's creative work. It provides a space for students to build "creative confidence." Viewing, discussing, and making art requires risk-taking.

- 1. For NAUFlex I created a "participation" activity where each student submits their artwork, and comments on peer work.*
- 2. By providing specific questions or writing prompts, I'm able to reinforce/scaffold concepts and terms to be used in feedback.*
- 3. As a bonus, students receive specific comments from their peers.*

Elisa Wideman- School of Art

PEER MENTORING WITH UNDERGRAD AND GRAD STUDENTS



Goal: To provide flexibility for students to develop the format of their final project. Grad students can also coach undergrads with advice about selecting a graduate program, how to apply, and how to adjust to an MA program.

- 1. Each graduate student mentors two undergrads by meeting them in Collaborate study rooms.*
- 2. During their scheduled time together, they discuss the readings and prepare responses to the weekly prompts.*
- 3. As the semester progresses, they peer review each other's final project plans and drafts. They also have an option to propose a small group project instead of individual projects.*

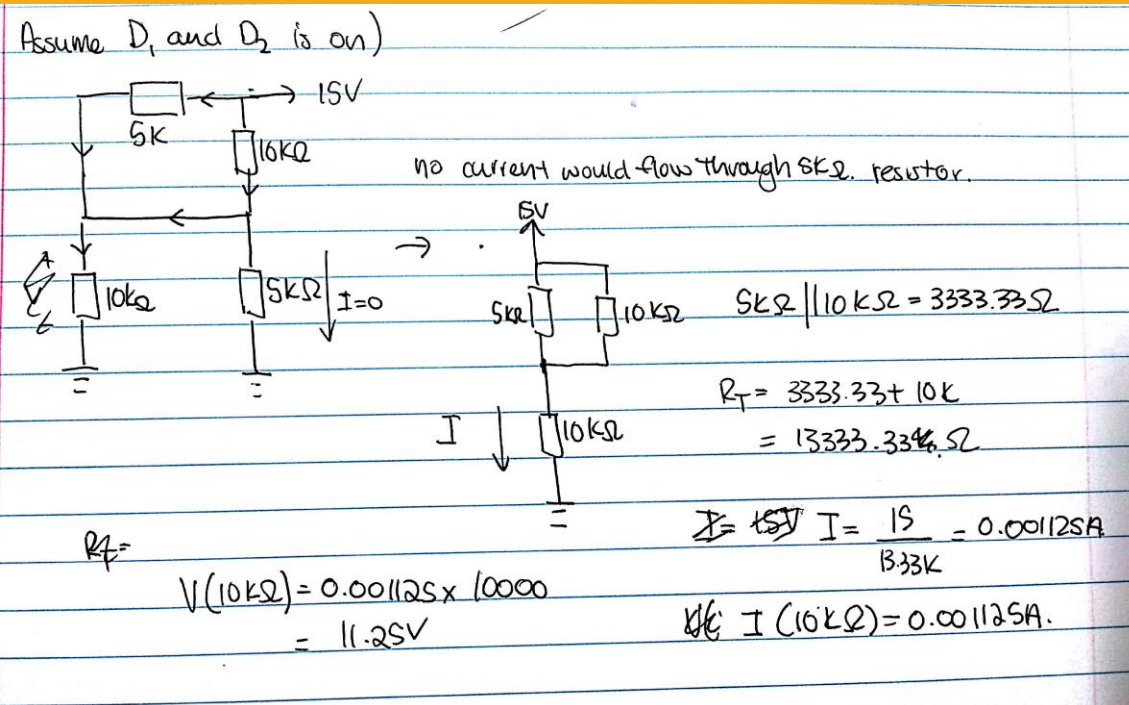
Kelley Hays-Gilpin- Department of Anthropology

STEM AND QUANTITATIVE COURSES

TOP TIPS:

- Ask **conceptual questions**
 - "what is the next step in this problem?"
 - "explain why this hypothesis in the theorem is necessary".
- **Identify an error** in a proof or computation.
- Replace multiple-choice and fill-in questions with **show-all-work** questions (students take a photo and upload).
- Use **letters and variables** in place of specific numbers.
- **Vary** the numbers, the names, and the scenario of your questions.
 - (change pulling a boat in to letting a kite string out).
- **Randomize** questions and answers, even parts of the problem
 - Option 1- "maximize the volume of the box given its surface area"
 - Option 2- "minimize the surface area of a box given its volume"
- Add **application** to simple computations. Instead of "calculate this integral", present students with an application they have to set up:
 - "Write an integral expression that is equal to the probability that..." or
 - "Write a triple integral which is equal to the mass of the region".

PROBLEM SOLVING- ENGINEERING



Goal: To determine how problem-solving skills are developing. Given a set of scientific principles and mathematical and computational tools, how do students go about answering a question, creating a design, trouble-shooting an issue, etc.

1. I have modified an assessment "teaching a showcase lesson" for NAUFlex. Students record and watch themselves teaching a lesson and evaluate their own performance using a detailed rubric (provided in advance).
2. Students set goals, based on the rubric results, to improve their own teaching skills.
3. Being able to articulate and verbally explain a problem solution is an effective learning exercise, as well as an effective assessment technique.

Tom Acker- Department of Mechanical Engineering

GROUP TESTS



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Goal: Engineering problems are similar to complex word problems in math, therefore it is important to assess a student's ability to solve these step by step problems. Traditionally we use written assessment via homework, quizzes, tests to see a student's ability to solve problems.

- 1. Group tests are effective as review.*
- 2. If the class as a whole does not do as well as expected, they complete the test again working in groups.*
- 3. The results are weighted for the group and individual results to get a reasonable average.*
- 4. Each student is required to explain in their own words, why their previous solution was incorrect.*

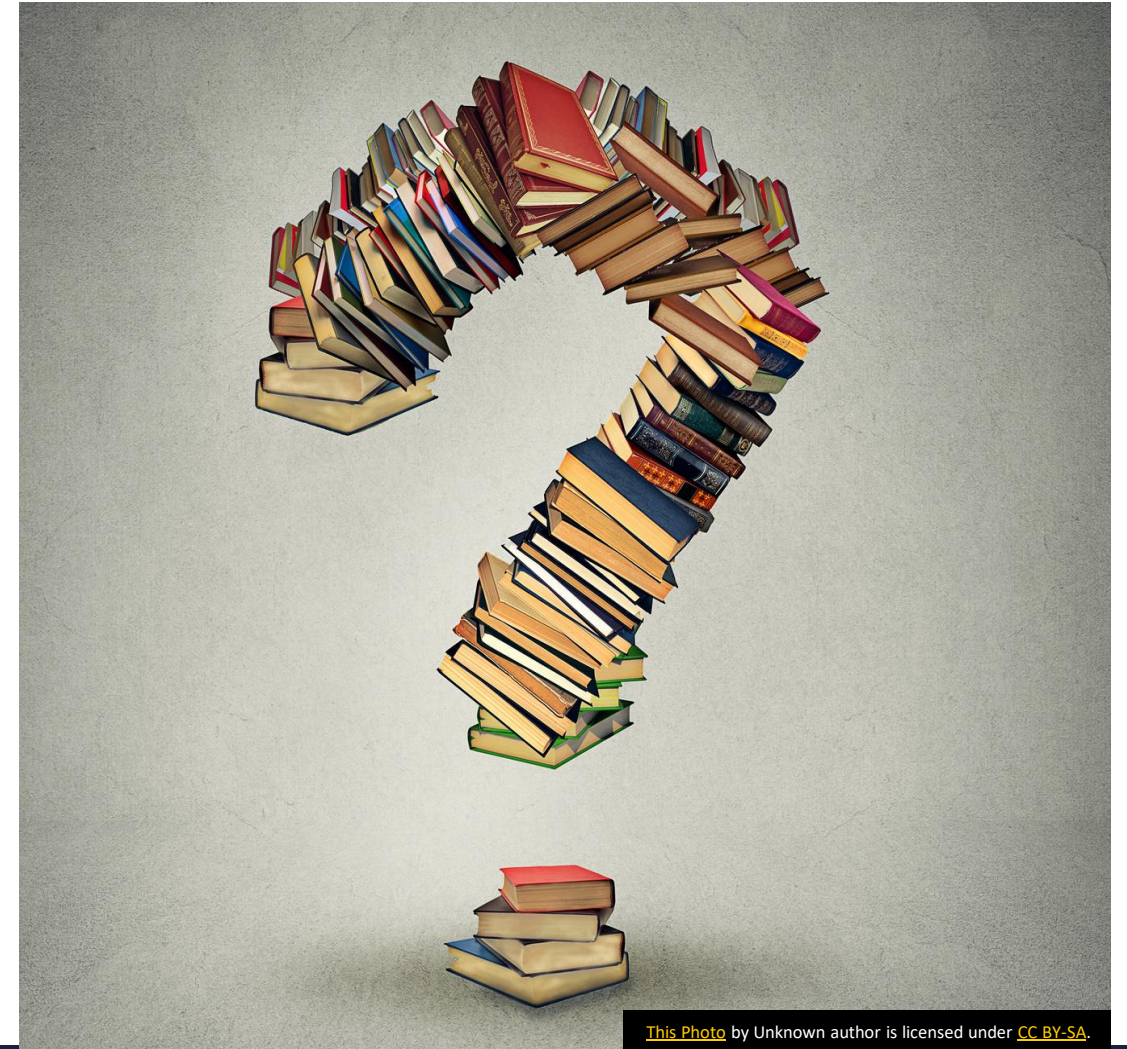
Heidi Feigenbaum- Mechanical Engineering

ALTERNATIVE QUESTIONS

Goal: To build skills for future debates.

- 1. For take home exams, students choose one question to answer from two lists. One list includes questions that require students to use reading material and class discussions to frame an issue and analyze it.*
- 2. The second list includes questions that are relevant to the course themes and are debated socially. Students present the problem and the debate around it, after they have presented all arguments, they critically explain why they support a particular side of the debate.*

Mohamed Mohamed- Department of Sociology



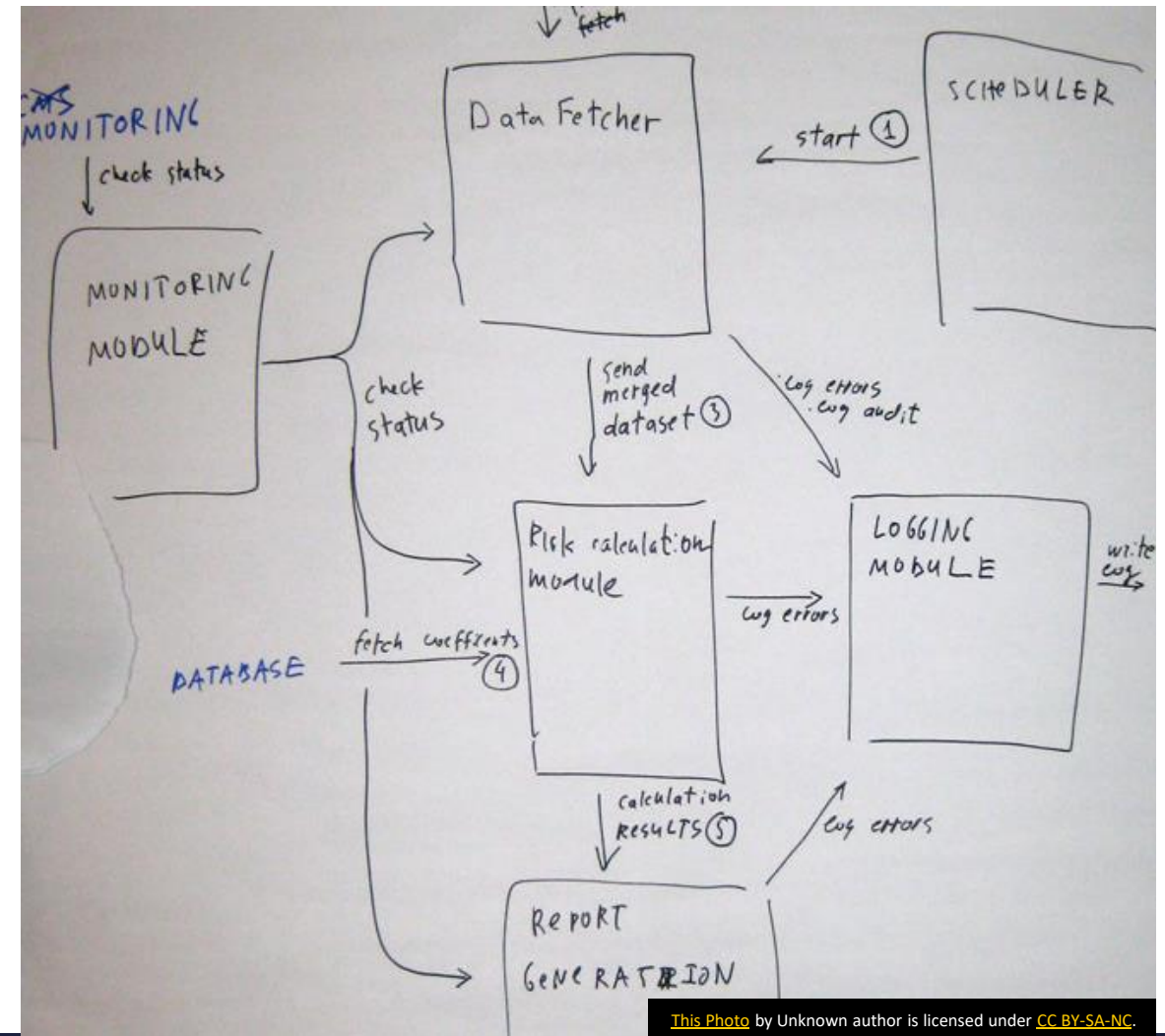
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SYSTEMS LEVEL DRAWINGS OR SKETCHES

Goal: To assess understanding of current concepts and identify gaps or misunderstandings to address and correct them.

1. A tutorial, rubric, and examples are provided to describe the drawings and how they are used.
2. Throughout the semester, students sketch out drawings for several systems and include the factors which are important for controlling the behavior of the system.
3. Through video feedback, I share with class particularly great examples and explain why they were chosen.

Deborah Huntzinger- School of Earth and Sustainability



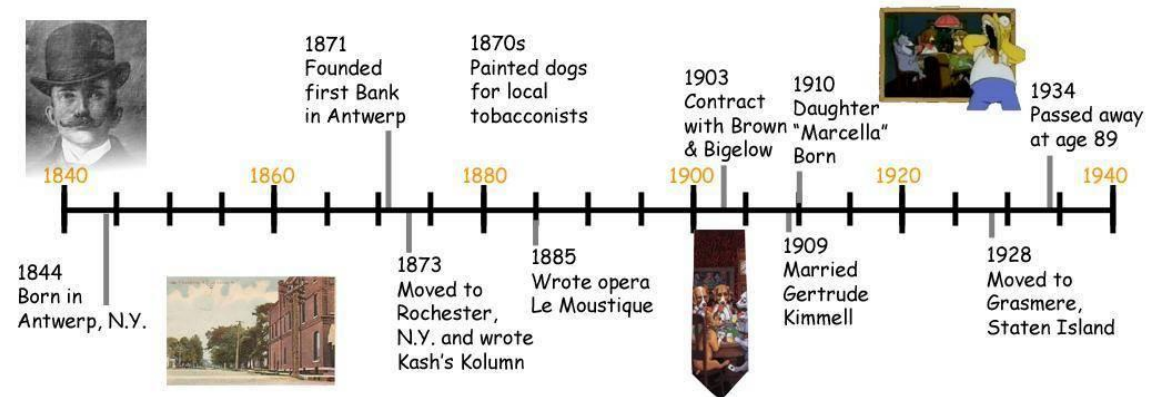
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ANNOTATED TIMELINE

Goal: Students engage in the process of planning, researching, and choosing important items to include in a timeline. It can be submitted as a word doc, a slide, a short video, or hand drawn.

- 1. Students include at least 10 annotated items and additional non-annotated items. Content can include a mix of key individuals, political events, conflicts, ideas, movements, etc., or they can focus on a theme or a category.*
- 2. Students are expected to answer the who, what, where, why, how, in their annotation of the item but also the 'so what?' question that justifies its presence on their timeline.*
- 3. Students write one paragraph per item (about 100 words).*

Diana Coleman Department of Comparative Cultural Studies



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DIGITAL STORY



Goal: Students take a personal piece of writing through the entire writing process and publish. They create a digital story to display their work.

- 1. Students record themselves telling a personal story related to the course content.*
- 2. Permission to share exemplary videos can provide examples to future classes.*

Li-Hsin Chien- Department of Astronomy and Planetary Sciences

ONLINE RESOURCE SCAVENGER HUNT ACTIVITY

Goal: To ensure students are able to seek out relevant literature to address the challenges of a modern organizational leader.

- 1. All instructions are available on Bb Learn and include directions for using Cline Library and Google to identify scholarly journals and appropriate newspapers.*
- 2. A series of scaffolding questions ensures students can find basic answers through their searches.*
- 3. Students answer more complicated questions to analyze the resources the class found collectively.*

Jason Myrowitz- NAU Yuma



SPECIFICATIONS GRADING- LINDA NILSON

1. Grades are pass/fail on individual assignments, bundles or modules.
2. Clear, detailed specifications (specs), perhaps models, for what constitutes a passing (acceptable/ satisfactory) piece of work are provided.
3. Students are allowed at least one opportunity to revise an unacceptable assignment, or start the course with a limited number of 'tokens' to exchange if they need to revise unacceptable work.
4. Learning assignments are tied to the learning outcomes of the course or the program.
5. Bundles and modules that earn higher course grades require students to demonstrate mastery of more skills and content, more advanced/ complex skills and content, or both.

BUNDLE EXAMPLE COMPLETE ALL:

C Bundle:

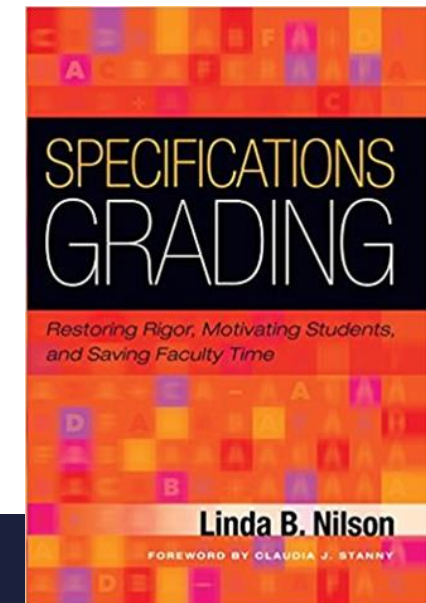
1. Actively attend all course meetings, with up to five absences, per the attendance policy
2. Complete at least 7 weekly screening responses to a Satisfactory level
3. Complete all 6 questions on the three take-home essay exams to a Satisfactory level.

B Bundle:

1. Actively attend all course meetings, with up to three absences, per the attendance policy
2. Complete at least 9 weekly screening responses to a Satisfactory level
3. Complete all 6 questions on the three take-home essay exams to a Satisfactory level, including at least 3 Advanced level questions

A Bundle:

1. Actively attend all course meetings, with up to two absences, per the attendance policy
2. Complete at least 10 weekly screening responses to a Satisfactory level
3. Complete all 6 questions on the three take-home essay exams to a Satisfactory level, including at least 5 Advanced level questions
4. Complete the original argumentative essay assignment to a Satisfactory level



STRATEGIES FOR FEEDBACK

- Use feedback to **shape coursework**.
- Use **whole class** feedback (create a video/email/announcement).
- **Scaffold** the feedback on smaller assignments to contribute to a larger project.
- Start with the **positive** and move to constructive advice.
- Provide **examples** of “great” work and work that “needs improvement”.
- **Summarize** what occurred in the live meeting for those that cannot attend.

FURTHER RESOURCES

Resources for Lab, Studio, and Field Experience Classes:

- <https://in.nau.edu/faculty-professional-development/remote-teaching/online-labs-and-simulations/>

Rubrics

- <https://jan.ucc.nau.edu/d-elc/tutorials/rubrics/rubrics.html>

Peer assessment

- ELC Tutorial on Peer Assessment https://jan.ucc.nau.edu/d-elc/tutorials/peer_assessment/peer_assessment.html
- Peer review resources from UM <https://lsa.umich.edu/sweetland/instructors/teaching-resources/using-peer-review-to-improve-student-writing.html>

Proctoring Alternatives and Resources

- <https://in.nau.edu/elearning/proctoring/>

Bb Learn student orientation:

- Have students complete the self paced Bb Learn student orientation
- You can Self enroll here: <https://in.nau.edu/elearning/workshops/>

Academic Integrity:

- Have students complete the self-paced Bb Learn course, Academic Integrity @ NAU (they are auto enrolled already).
- Safe Assign [Getting Started](#) and [Instructor Guidance](#)

NAU recorded Webinars:

- [Creating "Cheat Proof" Online Tests](#)
- [Redesigning Your Online Exams](#)

Designing Effective Questions to Reduce Cheating

- A Faculty Focus Article: [Good Questions for Better Essay Prompts.](#)
- A Faculty Focus Article: [Fourteen Simple Strategies to Reduce Cheating on Online Examinations.](#)
- A Faculty Focus Article: [Why Open-book Tests Deserve a Place in Your Courses.](#)