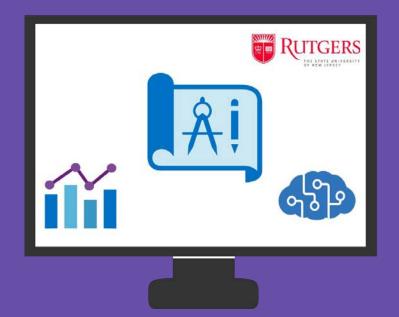
Best Practices for Effective Online Course Design

Center for Teaching Advancement and Assessment Research



Agenda

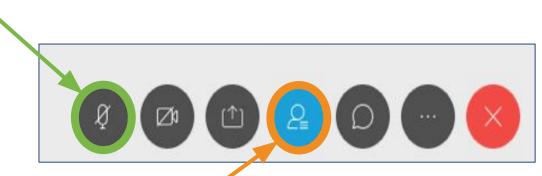
- 1. Designing courses using the backward design model
 - a. Learning outcomes
- 2. Determining Acceptable Evidence of Learning
 - a. Assessments
 - b. Connecting learning goals to assessments
- 3. Learning Experiences and Instruction
 - a. Synchronous lectures
 - b. Asynchronous lectures
 - c. Engaging students
 - d. Clear Communication

Housekeeping

• You have been muted on entry



 When you move your mouse you will see these tools at the bottom and click on the microphone to un-mute yourself



 In large groups I may ask people to raise their hand to be called on - click participant list and hover over your name - click on little hand



Discussion Question

Virtual Meeting Platforms I have used for teaching...

- A. Webex
- B. GotoMeeting
- C. Zoom
- D. Google Meet
- E. BigBlueButton
- F. Skype or Microsoft Teams



Introductions in Voicethread



Course Design Considerations

- Department, discipline, unit
- Students
 - Any prerequisites or prior knowledge
 - Important for career preparation
 - How many students

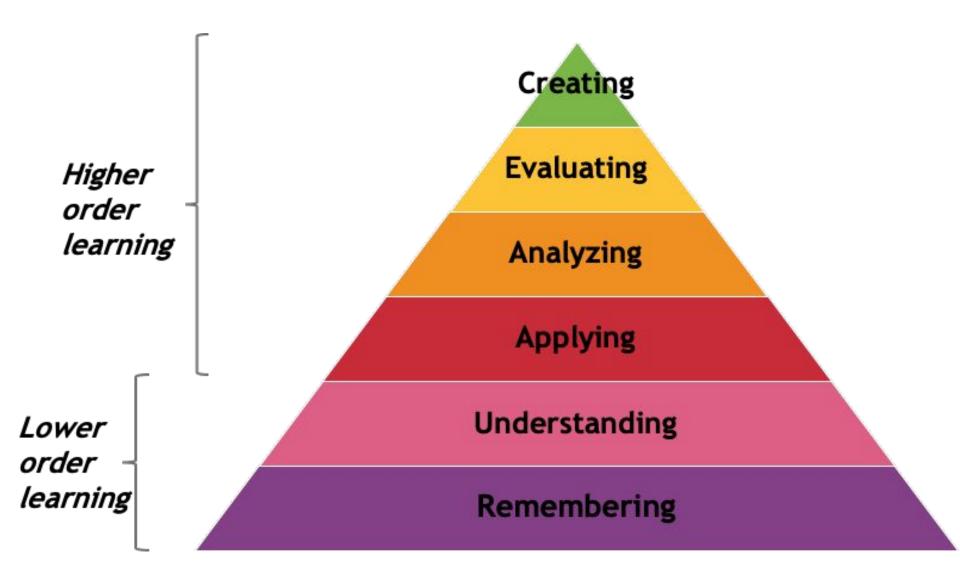
Backward Course Design



Learning Goals/Objectives

- Learning goals list the content, skills of course
- What students will be able to know and do at end or the attitudes, beliefs, or skills they acquired (student outcomes of course)

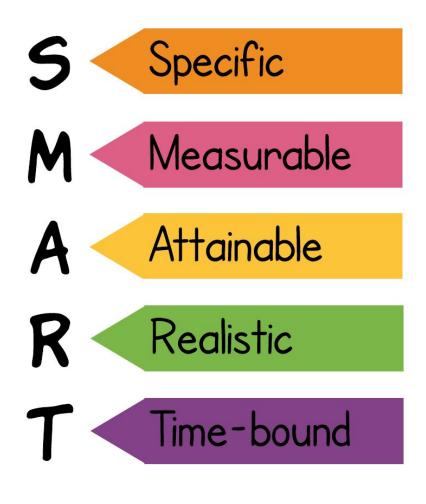
Bloom's Taxonomy of Learning Domains



Bloom's Taxonomy of Learning Domains

creating	= can the student create new product or point of view? = can the student justify a stand or decision?
Analyzing	= can the student distinguish between the different parts?
Applying	= can the student use the information in a new way?
Understanding	= can the student explain ideas or concepts?
Remembering	= can the student recall or remember the info?

Write "Course Learning Goals"



- Consider having goals at different levels of Bloom's
- Consider if some

skill-based or

non-cognitive learning

outcomes are relevant

in online environment

Worksheet

- What are your learning goals?
- Select goals from a class and paste
 (or write) into your worksheet

Discussion Question

Should you modify any of your learning goals for an online learning environment?

- A. No, they all work
- B. Yes, I might change one or two
- C. Yes, I might change many
- D. Unsure



Determine acceptable evidence

What will demonstrate mastery?

- Evidence of Learning: work that students must "DO" to demonstrate they achieved the learning goals
- Consider how activities, assignments or assessments can show if student has mastered the learning goals

Designing Assessments

Formative Assessment

Is part of the instructional process and focused on supporting improvement

Summative Assessment

Used to determine at a particular point in time what students know and do not know

- Quizzes
- Creation of student learning evidence
- Classwork
- Homework
- Exit tickets
- Assists instructor in modifying future class planning based on learner needs

- ways to assess
- used for student
 - feedback
- assist in future
 class planning

- Final and midterm exams
- Chapter tests
- Scores used for accountability
- State assessments
- SAT or ACT type

tests

Formative Assessments: Clicker-type questions

- Kahoot! **
- Poll Everywhere
- iClicker
- Canvas quizzes **
- Video questions **

**** Use for synchronous or asynchronous**

Playposit Demonstration

- Embed questions, discussions, other links etc. into video- your own, Kaltura or Youtube videos
- Wonderful for lectures and formative assessment
- Integrates with Canvas
- <u>Sample PlayPosit "Bulb"</u>



Team Projects and Assignments

Allow students to choose groups or intentionally set the teams?

- Consider time zones of students
- Keep groups small and odd

Technology options for synchronous team projects:

- Google
- Canvas
- Collaborative projects in Word Online using Box

Summative Assessments

Traditional summative assessments (such as exams) may not work well in online environments

Consider reworking to focus on frequent, lower stakes assessments

Online tools for quizzes, tests

- LMS Quizzes
 - New Canvas Quizzes will actually let you <u>link to objectives</u>!
- <u>Akindi</u>



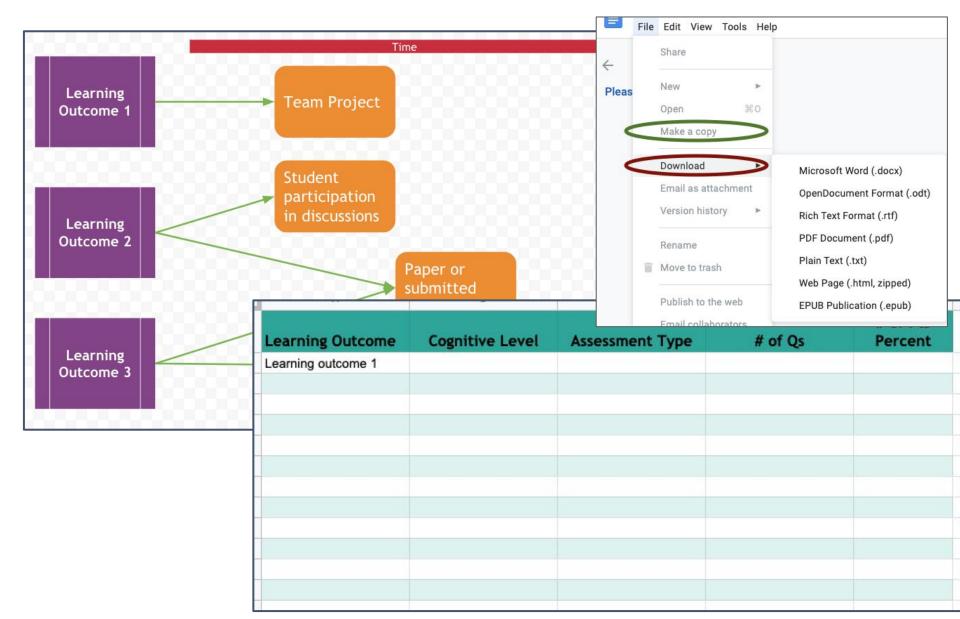
Academic Integrity

Platform	Benefit	Drawback
turnitin Plagiarism detection for written assignments		None
• Proctortrack	Uses webcams and screen tracking to track student activity	Takes time to review flagged activity and decide if cheating occurred; may not work on certain devices
proctor	Live webcam and screen tracking proctoring	Limited availability, minimum device requirements
Respondus Lockdown Browser	Prevents printing, copying, going to another URL, or accessing other applications	Does not work on certain devices; most students have multiple devices
Virtual Meeting Proctoring	Use virtual meeting platform (Webex, Zoom) to proctor students	Requires constant attention or manual review

If You Choose Proctoring and Lockdown Browsers...

- Experiment with a low stakes assignment or quiz first
- Have an alternative in case of technology issues or students who are flagged by software
- Some students don't have appropriate technology
- Proctoring technology may not work on every device

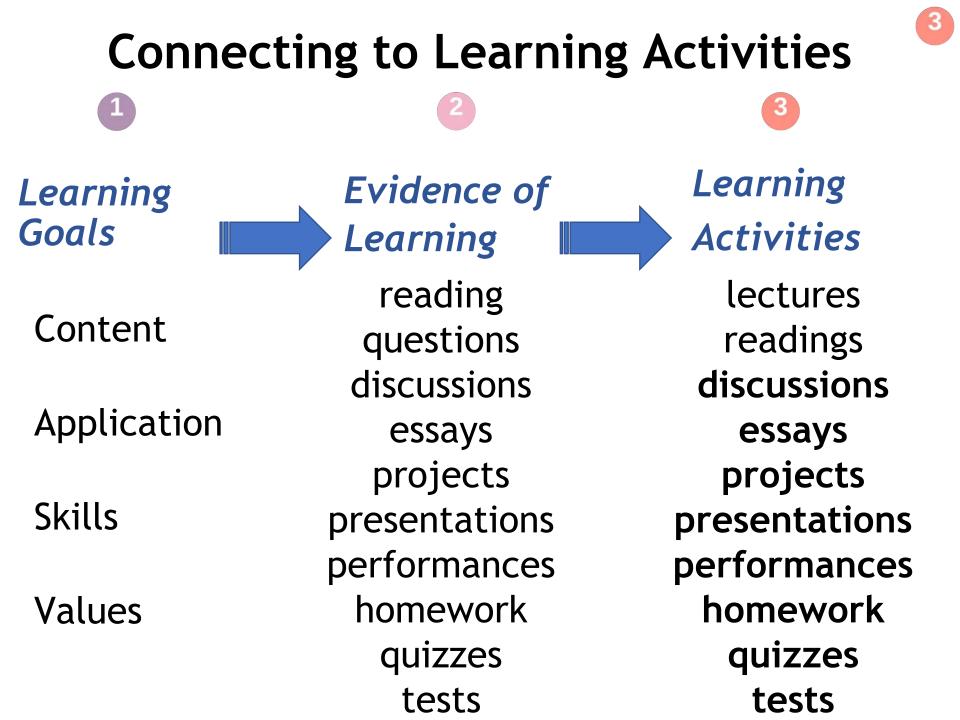
Mapping Outcomes to Assessments



Plan learning experiences and instruction

Learning Activities

- Opportunities when students engage with subject matter of course, practice skills to ensure they will be prepared for assessments
- These are the learning experiences and instruction
- These could overlap with assessments particularly formative assessment



How will you present content?

Synchronous Lecture (Students watch live)

- Advantages: Live participation is possible, live Q&A
- Disadvantages: Access challenges for students

Asynchronous Lectures

- Advantages: Pre-recorded content is easier to create, reusable lectures possible, access is more equitable, students can rewatch
- Disadvantages: Participation is more difficult, Q&A is not live

If Giving Synchronous Sessions:

How will holding synchronous sessions help students obtain mastery of learning goals better than the asynchronous option?

Find a way to engage students. Why should they all be present if you aren't engaging them?

You should still record it for students who aren't able to attend at the specified time

Online Tools for Hosting Synchronous Video

Platform	Benefit	Drawback
Webex Meetings	Supported by OIT, ease of use	Does not have breakout rooms
Webex Trainings	Supported by OIT, breakout rooms	Clunky interface, participant audio issues possible
BigBlueButton	Integrated with LMS, has breakout rooms	Technology glitches for some users
Microsoft Teams	Supported by OIT, real-time captioning, has breakout rooms	Still in development
Zoom	Breakout rooms	Security issues, not supported by OIT
Google Meet	Currently free, real-time captioning	Not supported by OIT

Tips for Making Asynchronous Video



*Video shot in Prezi Video

Summary of Video

- Can you adapt other material that is already available? Make them short! 5 to 10 minutes is much better than longer
 - Part of a "chunking process"
 - Fits with student's attention process
 - Easier to correct your own mistakes
- Try to be on video so that you can connect with the students
 - Try to make visuals more dynamic since you are not present (consider animations, drawing on screen)

Tools for Asynchronous Video

Platform	Benefit	Drawback
Kaltura Capture Space	Video capture and hosting	Supported by OIT, Very little editing
Webex/BigBlueButton/ Zoom	Virtual meetings can be used to capture and host	12 hours to process, does not have editing
Prezi Video	Combine slides with video, free version available	Paid versions have better features
Camtasia	Excellent functionality	Not free!
VoiceThread	Can add video to a slideshow	Long process to create
PowerPoint with Voiceover	Simple to create	No video
Loom	Simple to create	
QuickTime + iMovie	Preinstalled, easy to use	
DaVinci Resolve	Free editing software	Does not capture video

Creating Khan Academy Type Videos

- Decide if using your computer or tablet
- Suggested to use a microphone
- If using computer need <u>writing surface</u>
- On iPad use whiteboard app <u>Screenchomp</u>, <u>ShowMe</u>, or <u>Educreations</u>
- <u>Nice overview of process on YouTube</u>



Online Tools for Hosting Asynchronous Video

Platform	Benefit	Drawback
Webex	Supported by OIT	Cannot embed, slow processing
Kaltura MediaSpace	Supported by OIT	Slow processing possible, editing is difficult
Youtube	Easy to integrate	Security issues
Canvas or other LMS	Already integrated for students	Space limits

Don't Reinvent the Wheel

A lot of resources already exist for you to use!

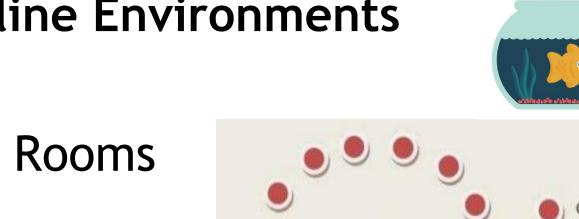
- Linkedin Learning
- Canvas Commons
- YouTube
- Open Educational Resources

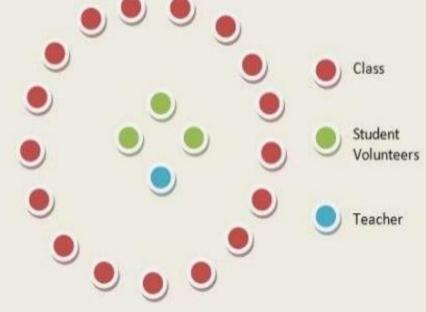


Techniques to Engage Students in Online Environments

- Breakout Rooms
- Jigsaws
- Fishbowls
- Polling
- Group Projects
- Concept Maps

https://dcs.rutgers.edu/active-learning/teaching-tools/activities







Online Discussions

Provide guidelines for communications (consider requirements as well as etiquette)

Example: "Please justify the answer you got"

Give specific directions, along with specific questions or guides

Determine whether you will grade contributions, and how

Use a Rubric to Grade Discussion

Online Discussion Forum Rubric

You've already rated students with this rubric. Any major changes could affect their assessment results.

Criteria	Ratings					Pts
Appropriate Engagement	2 pts		1 pts Partial Credit Is missing one original post or one reply to another student's post		0 pts No Marks Did not engage with discussion	2 pts
Grammar and syntax	2 pts Full Marks Posts are written with appropriate grammar and syntax		L pts Partial Credit Some grammar and syntax issues obscure neaning	1000000	farks or errors in grammar and	2 pts
High Quality Engagement	2 pts Full Marks Engagement was high quality	1 pts Partial Cre Engageme	edit nt was not always high quality	0 pts No M Low q		2 pts

3

◎Q前

Online Tools for Communication

- LMS Announcements
 - Text or video!
- LMS Inbox
- Email
- VoiceThread
- Loom (short videos)
- Phone (<u>Google Voice</u>)
- Online office hours



Clear Communication

- Make course transparent for students
- Explain the purpose of various elements
- Consider giving checklists or other organizer

Objective Number	Objective Description		Complete	Proficiency
1	Use the power rule to			
-	in order to use the pov	ver rule		
	-	Practice Problems: Page 191 Q3-15 odd, 19-25 odd		
2	Know and use the deriv	vative of e^x to find derivatives of various functions		
		Practice Problems: Page 191 Q17,33		
		Post your response about exponential function on your		
		blog.		
Use the product and quotient rules to find the derivatives of a variety of				
3	3 functions			
		Practice Problems: Page 197 Q3-19 odd		
4		vatives of the 6 trig functions, in conjunction with power, ules to find the derivatives of various functions		
	-	Practice Problems: Page 216 Q1-15 odd		
5	Find the equation of a	tangent line to a curve		
		Practice Problems: Page 191 Q39,41; Page 197 Q23,25		

WebAssign Quiz for Stage 8

STAGE 8 GATEWAY TEST	
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Examples of Online Courses

 https://distance.uiowa.edu/courses/sample-onlinecourse

Resources

- Syracuse University "Summer Online Course Checklist"
- Lederman, D. (2020). How Teaching Changed in the (Forced) Shift to Remote Learning. Inside Higher Ed.
- <u>Vanderbilt University Teaching Center "Understanding by</u>
 <u>Design"</u>
- <u>https://li.wsu.edu/teaching-tool-boxes/emergency-tool-kit-f</u> <u>or-extended-distance-delivery/</u>
- <u>Compilation of online tools for content delivery</u>
- <u>Wiggins, Grant, and McTighe, Jay. (1998).</u> <u>Backward Design.</u> <u>In Understanding by Design</u>
- <u>ACUE's Online Teaching Toolkit</u>

Technical Questions?

Questions about Canvas? <u>http://canvas.rutgers.edu</u>

Questions about Sakai? sakai@rutgers.edu

Questions about Proctoring Technology? proctoring@docs.rutgers.edu

Questions about other technology? help@oit.rutgers.edu