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Online Assessment Methods for Student-Centered Learning: Active Learning, Collaboration, and Application with Authentic Assessment

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Online Assessment Methods *for* Student-Centered Learning

Active Learning, Collaboration, & Application with Authentic Assessment

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Gunawardena, C. N., Moore, S. L., Barril, L., & Thabotharan, K. (2020, November 18). *Online Assessment Methods for Student-Centered Learning: Active Learning, Collaboration, and Application with Authentic Assessment* [Invited Panel Presentation for Sri Lankan Universities]. Sponsored by the United States - Sri Lanka Fulbright Commission, Colombo, Sri Lanka.

Agenda

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Lani Gunawardena

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Stephanie Moore

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Lani Gunawardena

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K. Thabotharan

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Linda Barril

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Stephanie Moore

Questions & Discussion

Introduction

Let's move:

- Away from remote emergency online assessments during COVID to well-designed authentic assessments that simulate professional skills
- Beyond multiple choice to a variety of assessment methods
- Beyond worrying about proctoring to continuous assessments
- Forward to changing the culture of assessment from pass/fail, normal/bell curve to learning improvement and student development

A Learning and Pedagogical Foundation & Taxonomy for Assessment Methods

STEPHANIE L. MOORE, UNIVERSITY OF NEW MEXICO, USA

Domains of Learning

Cognitive

Psychomotor

Affective

Conative

Make a decision based on output from equipment

Evaluate an approach or technique

Analyze data or performance

?

Manipulate equipment (the feel, the sound)

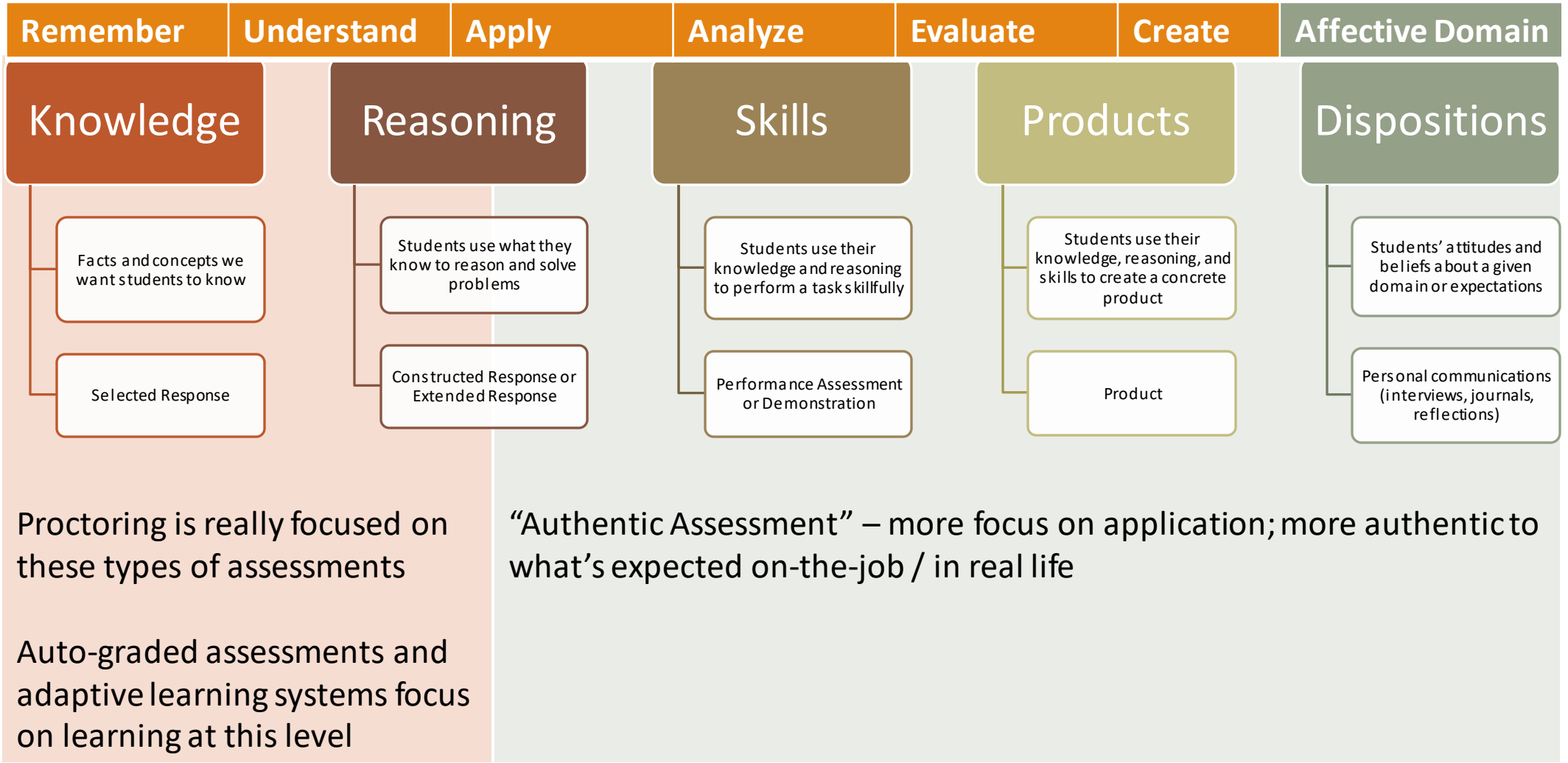
Demonstrate a physical skill

Learning Taxonomy

Bloom's* Taxonomy	Recall	Retention	Transfer	Application
Remember				
Understand				
Apply				
Analyze				
Evaluate				
Create				

*Anderson, Krathwohl, & Bloom (2001)

Assessment

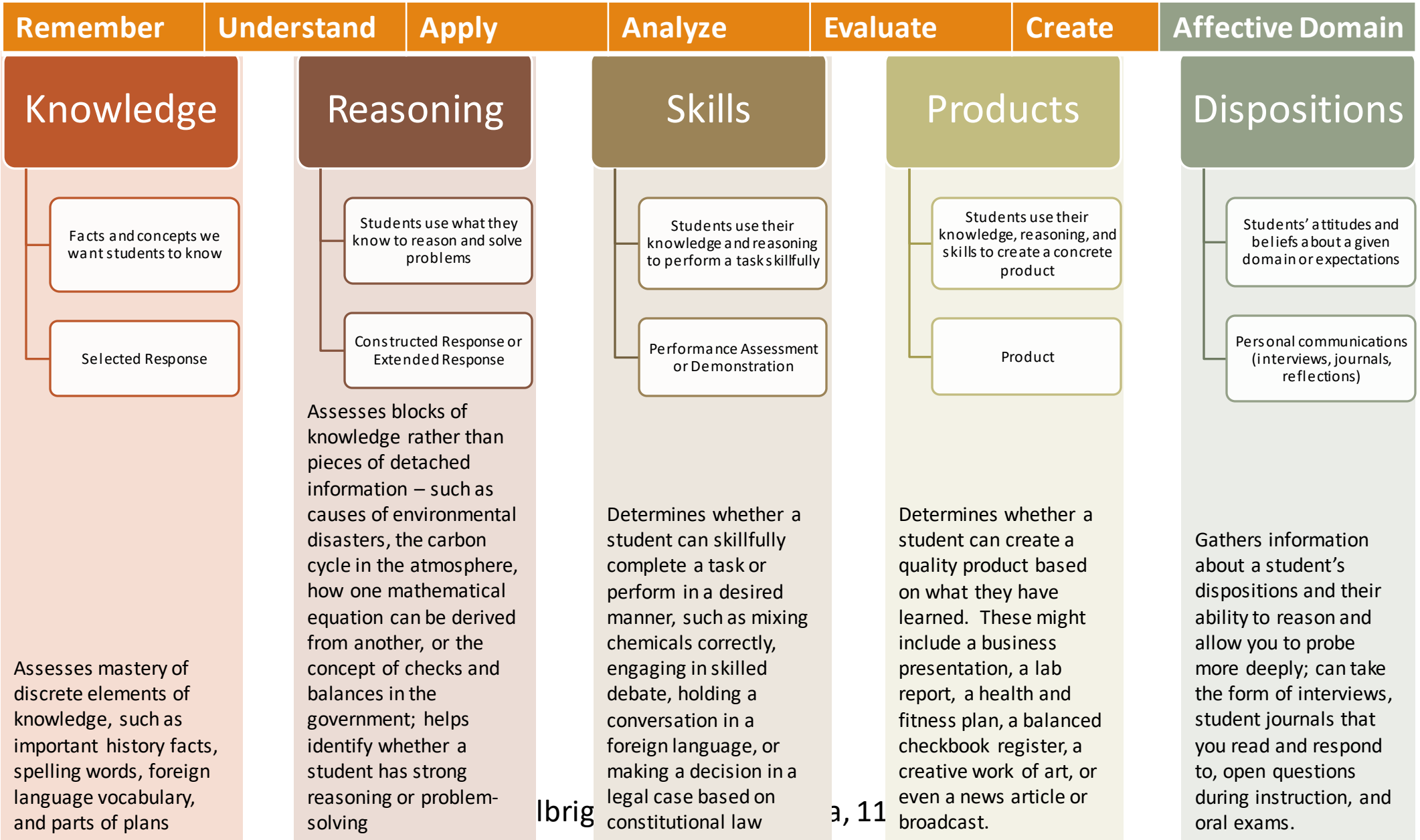


Proctoring is really focused on these types of assessments

Auto-graded assessments and adaptive learning systems focus on learning at this level

"Authentic Assessment" – more focus on application; more authentic to what's expected on-the-job / in real life

Stiggins & Conklin, 1992; Chappuis & Stiggins, 2016


Remember
Understand
Apply
Analyze
Evaluate
Create
Affective Domain
Knowledge
Facts and concepts we want students to know
Selected Response
Assesses mastery of discrete elements of knowledge, such as important history facts, spelling words, foreign language vocabulary, and parts of plans
Reasoning
Students use what they know to reason and solve problems
Constructed Response or Extended Response
Assesses blocks of knowledge rather than pieces of detached information – such as causes of environmental disasters, the carbon cycle in the atmosphere, how one mathematical equation can be derived from another, or the concept of checks and balances in the government; helps identify whether a student has strong reasoning or problem-solving
Skills
Students use their knowledge and reasoning to perform a task skillfully
Performance Assessment or Demonstration
Determines whether a student can skillfully complete a task or perform in a desired manner, such as mixing chemicals correctly, engaging in skilled debate, holding a conversation in a foreign language, or making a decision in a legal case based on constitutional law
Products
Students use their knowledge, reasoning, and skills to create a concrete product
Product
Determines whether a student can create a quality product based on what they have learned. These might include a business presentation, a lab report, a health and fitness plan, a balanced checkbook register, a creative work of art, or even a news article or broadcast.
Dispositions
Students' attitudes and beliefs about a given domain or expectations
Personal communications (interviews, journals, reflections)
Gathers information about a student's dispositions and their ability to reason and allow you to probe more deeply; can take the form of interviews, student journals that you read and respond to, open questions during instruction, and oral exams.

Assessment – Ideas for Online

Knowledge

- Facts and concepts we want students to know
- Selected Response

Examples for online:

- Quiz or test tools (objective items)
- Audio voice threads (e.g. language instruction)
- Recitations (record something that has to be memorized)

Reasoning

- Students use what they know to reason and solve problems
- Constructed Response or Extended Response

Examples for online:

- Quiz or test tools (open-ended items)
- Sorting activities
- Record solving a problem and submit that recording
- Paper on a topic
- Presentation on a topic (record and submit as assignment or share in a discussion forum)
- Case studies requiring students to apply course content and derive a solution

Skills

- Students use their knowledge and reasoning to perform a task skillfully
- Performance Assessment or Demonstration

Examples for online:

- Students record themselves performing a skill (e.g. a lab, an exercise routine, a talk-aloud on their design process for a product) (assess using a rubric)
- Students perform a skill during a live video session (e.g. labs) (assess using a rubric)
- Simulation or role playing

Products

- Students use their knowledge, reasoning, and skills to create a concrete product
- Product

Examples for online:

- Students complete a project – individually or as a group – and submit (assess using a rubric)
- Students construct a writing sample – individually or together – on a wiki or GoogleDoc (e.g. mimic a writer's style or revise an essay with issues that you load for them)

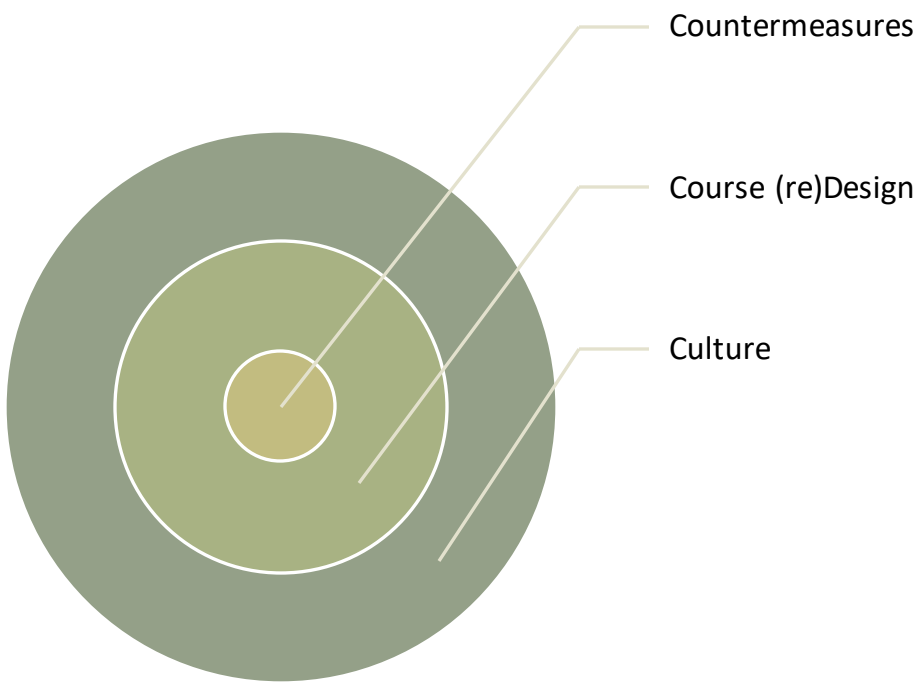
Dispositions

- Students' attitudes and beliefs about a given domain or expectations
- Personal communications (interviews, journals, reflections)

Examples for online:

- Students maintain a reflection journal throughout class with prompts that focus on beliefs and attitudes
- Personal communications – open questions during instruction, oral exams, one-on-one feedback loops

Three Approaches to Reducing Cheating



Countermeasures

- Timed testing
- Proctoring
- Random selection from a test bank
- Random presentation of items

Course (re)Design

- Multiple, more frequent assessments
- Use formative assessment
- Use feedback and opportunities to apply feedback for improvement

Cultural Interventions

- Change student attitudes
- Marketing campaign about student attitudes
- Honor codes (UVA's is student-led)

Assessing Collaborative Learning

LANI GUNAWARDENA, UNIVERSITY OF NEW MEXICO, USA

Syllabus – OILS 532 eLearning Course Design

Assignments	Points
1. Personal Design Framework	10
2. Revised Personal Design Framework	10
3. Group eLearning Design Project: • Learner Analysis (15 points) • Initial Design Document (10 points) • Usability Testing (15 points) • Final eLearning Design Project (25 points)	65
4. Participation in Class and Group Activities	15
TOTAL	100

Syllabus – Expectations for Demonstration of Skills

Grades will be based on the successful completion of the above-mentioned requirements with evidence of the following characteristics:

Higher order thinking skills - the ability to apply, analyze, synthesize and evaluate

Effective communication skills - the ability to get information across effectively, orally and in writing

Collaborative learning skills - the ability to work effectively in a group

Self-direction and motivation

Professional commitment - a sense of responsibility, meeting deadlines, etc.

Syllabus – Grade Expectations for A+

- I do not grade on the curve, so if all students do exceptional work, all students earn an A.
- A+ students are excellent collaborators and put their effort into building a learning community in this class.

The grade of A+ is reserved for outstanding performance and exceptional contribution to the learning community with evidence of leadership and mentoring. This grade is awarded to those who have not only demonstrated their own progress and expertise in course activities, but also shown their selfless service to others in this class and beyond.

Academic Integrity

You must follow copyright laws and cite work and images and obtain permission to use them

We treat academic dishonesty very seriously. Plagiarism of any kind will result in a grade of F as well as further actions by the Dean of Students as described in The UNM Pathfinder under Policy on Academic Dishonesty. Unless I indicate otherwise, all work done for class (written assignments, oral presentations, quizzes, exams, etc.) must be prepared in its entirety by the person whose name appears on it. This means that, among others, the use of translation software or the excessive help of mentors or tutors (third party help) is unacceptable (see example at computer translation). Translating the original text of another author, even if the translation is your own, and attempting to present the work as your own original work also constitutes plagiarism. Any information gathered from the Internet and used in an assignment must be correctly acknowledged and cited. Not doing so constitutes a case of plagiarism and will be subjected to the sanctions just outlined.

Directions for Asynchronous Discussions

(OILS 535_2020 Culture & eLearning - Gunawardena)

☐	Discussion: Definition of Culture & eLearning	**August 19-25** In this discussion you will explore how to define *culture* and *eLearning*. Then, you will determine how culture and eLearning are related. • **Engagement/Interaction:** Build on each others' posts to discuss where you may have similar or different views from each other. Explain why you agree, and if you disagree, how you would change the definitions. The goal of this discussion is to come to a consensus on a definition of culture and eLearning, and how culture and eLearning are related, based on the perspectives put forward by the class. First poster, click **REPLY** to the Instructions post, and reply to your classmates' posts by clicking on **REPLY** on their messages. **First postings due Friday, August 21; Replies by Tuesday August 25.**	132	0	0	20

Self Assessment Survey

(scale *strongly disagree, disagree, agree, strongly agree)*

Community Building:

1. I addressed others by name and/or mentioned the name/s of previous posters in referring to their statements.

2. I supported or encouraged others to express their views and experiences.

3. My messages were positive and cordial in tone.

4. When disagreeing, I treated other's views respectfully, and stated specific reasons for disagreeing.

Knowledge Building:

5. I introduced personal life or professional experience directly relevant to the discussion topic.

6. I referred to the required reading/s (quoted or paraphrased accurately) in my posts.

7. I asked questions about, or restated the content of, a previous post to clarify.

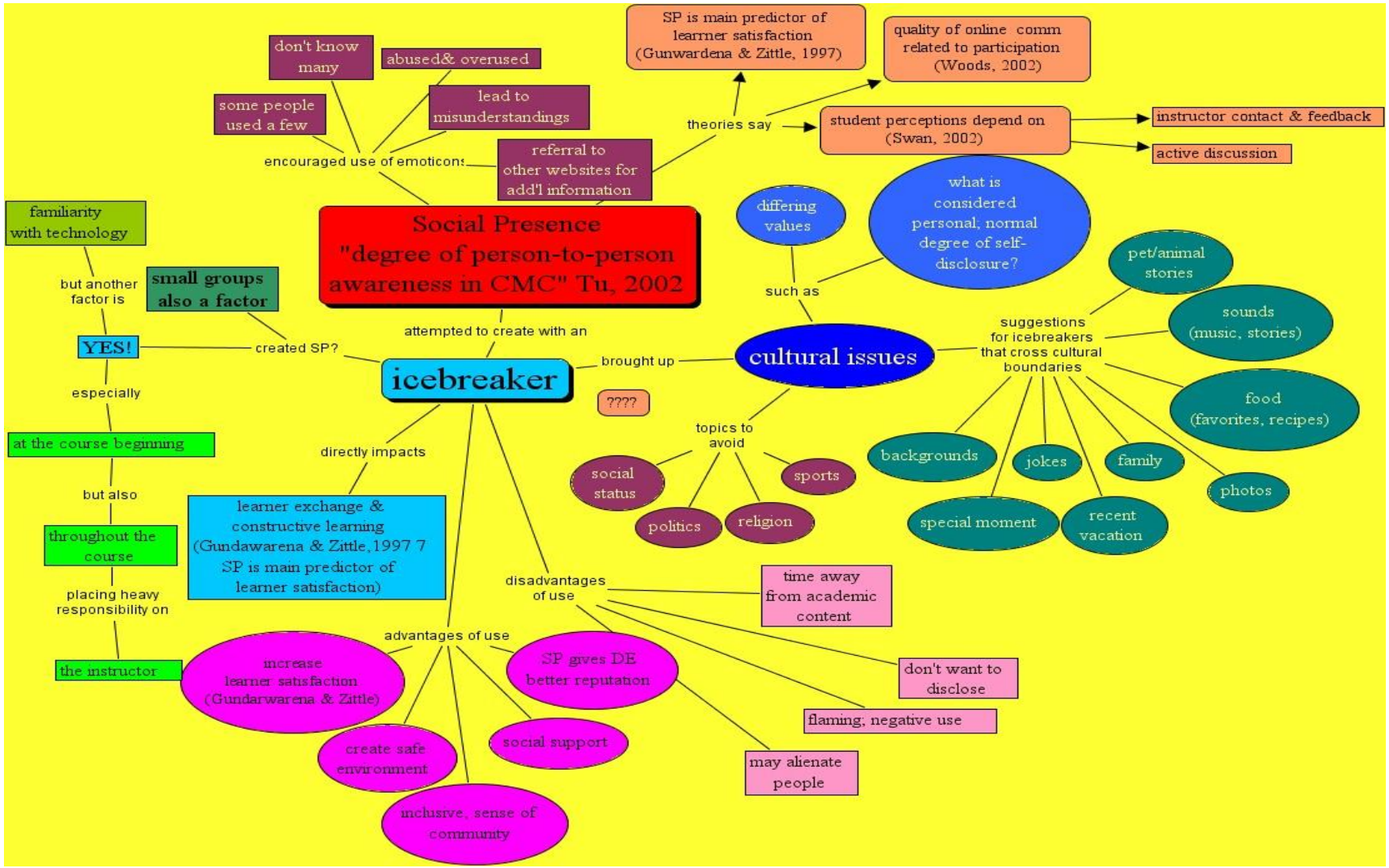
8. I agreed or disagreed with a previous poster and gave reasons or examples.

9. I asked a question that lead the discussion into a new but related area.

10. I pointed out relationships between ideas advanced by different authors.

Figure 16.3. Self-assessment Survey. **Source:** Gunawardena, C. N., Frechette, C., & Layne, L. (2019). *Culturally Inclusive Instructional Design: A Framework and Guide for Building Online Wisdom Communities.* New York: Routledge.

Peer Synthesis of Group Discussion - Preserving Social Construction of Knowledge (From OLIT 535 - Gunawardena)



Group Process Evaluation Form

This form helps you to reflect on your group process, and the contribution of your peers to the group process. Using the following scale, indicate the number which, in your opinion reflects each group member's contribution to the group project in each of the categories. You should first evaluate yourself and then write down the names of each group member and evaluate their contributions.

1 = very poor 2 = poor 3 = average 4 = good 5 = excellent

	Yourself						
Contribution to the analysis and synthesis of ideas during group discussions.							
Contribution to the writing of the group paper and completion of assigned activities.							
Collaboration: the ability to work effectively in a group and contribute as a group member.							
Self-direction and motivation.							
Commitment to group goals.							
Sense of responsibility to group – meeting deadlines, informing others of progress, etc.							
Percentage of Effort in the Group Project. (Here list your perception of the percentage of effort contributed by each member towards the group project. The percentages you assign to yourself and other members of the group must total to 100)							

Using the following scale, indicate the number which reflects your opinion of the climate in your group in the blank provided for each statement.

1 = strongly disagree 2 = disagree 3 = neutral 4 = agree 5 = strongly agree

_____There was a high degree of cooperation and coordination among group members.
_____I freely contributed my thoughts and ideas during group meetings.
_____Conflict was managed constructively by group members.
_____Group members communicated clearly with each other.
_____The tasks for this group were distributed equally.

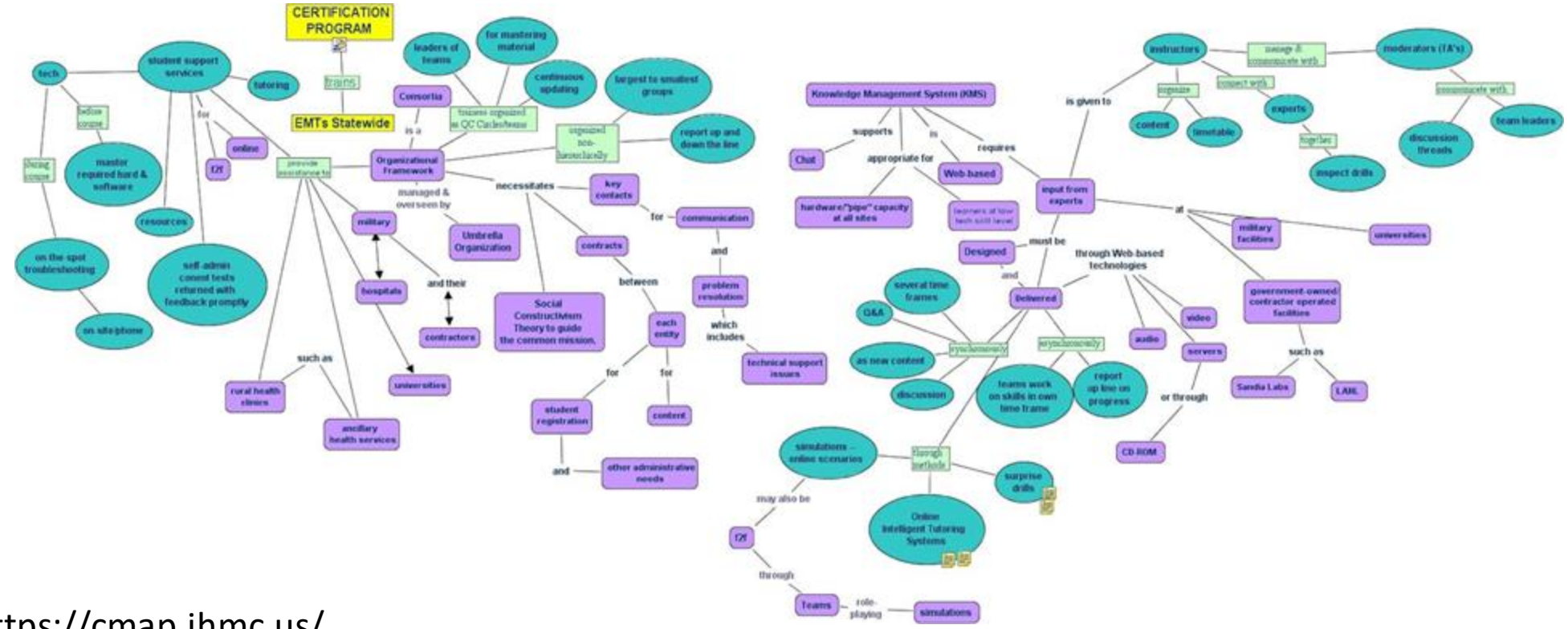
Please describe the tasks you completed and contributed toward the group project:

Figure 16.4. Group Process Evaluation Form.
Source: Developed by Charlotte N. Gunawardena and used with permission.

Figure 16.4. Source: Gunawardena, C. N., Frechette, C., & Layne, L. (2019). Culturally inclusive instructional design: A framework and guide for building online wisdom communities. New York, NY Routledge.

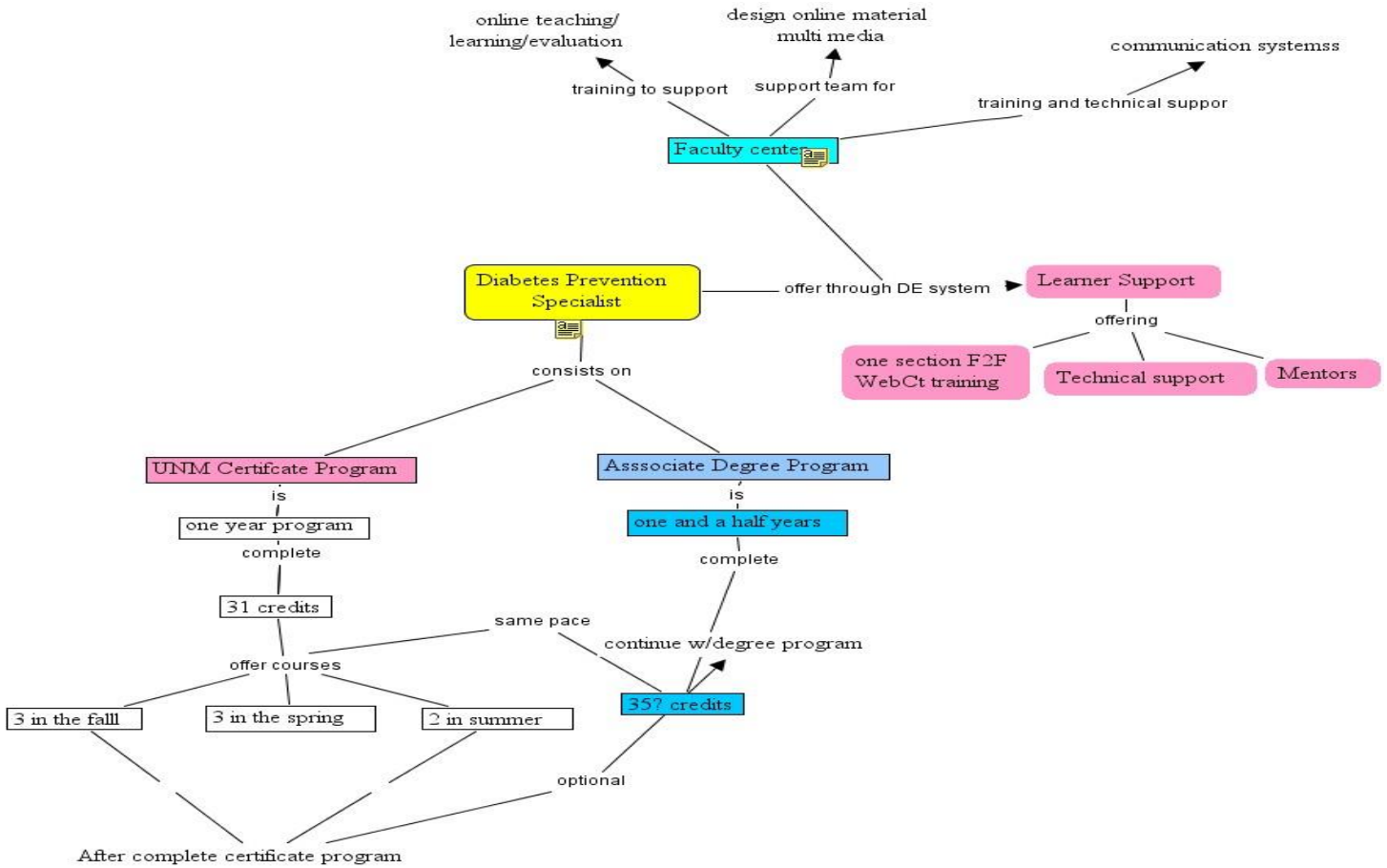
Assessing Collaborative Inquiry-Based Learning (CIBL) while Developing an EMT Certification Program

Figure 12.3. **Source:** Gunawardena, C. N., Frechette, C., & Layne, L. (2019). Culturally inclusive instructional design: A framework and guide for building online wisdom communities. New York, NY Routledge.



Cmap - https://cmap.ihmc.us/

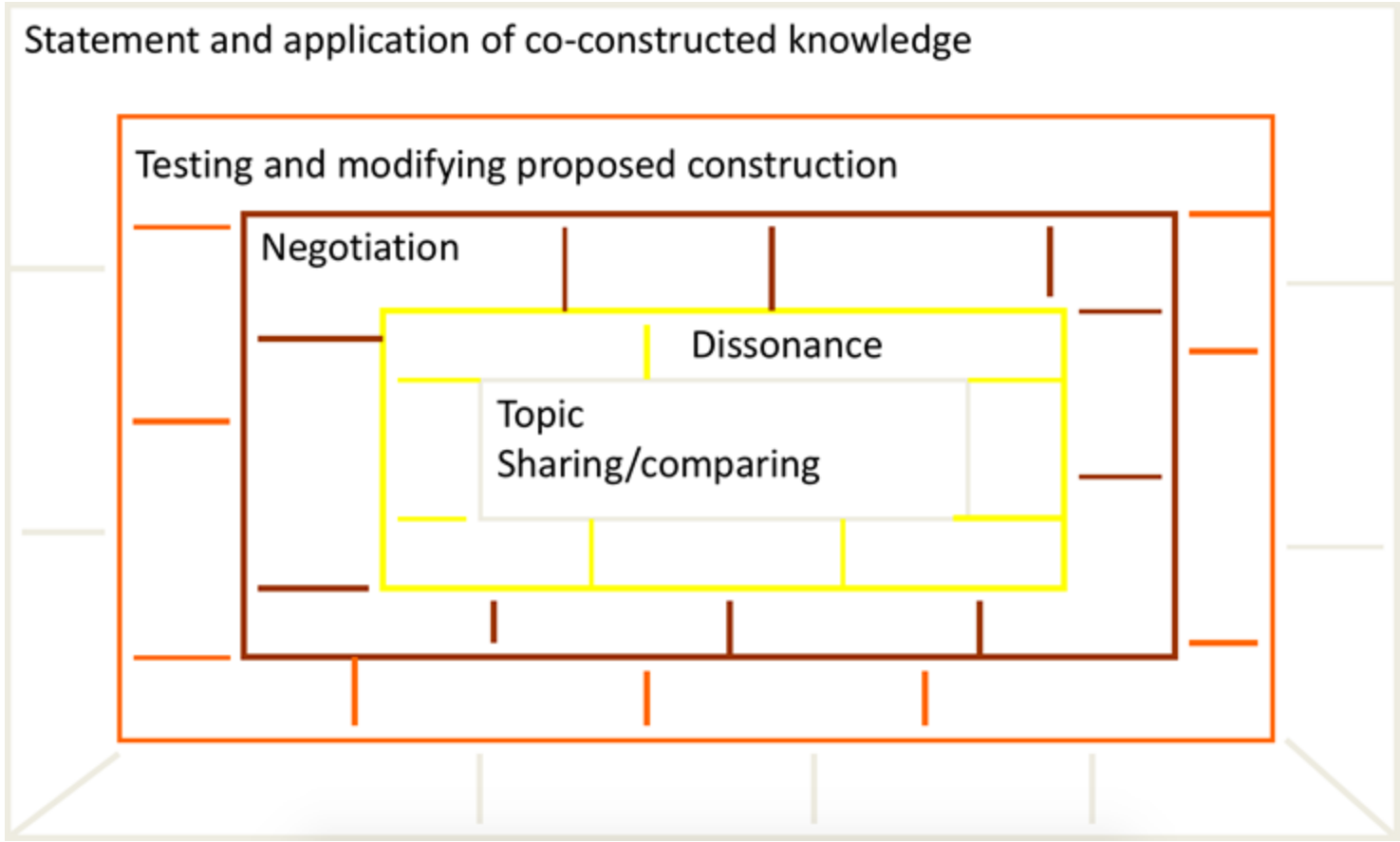
Collaborative Concept Mapping to Develop a Diabetes Prevention Specialist Program – Example of Ongoing Instructor Feedback



Source: Figure 16.5. **Source:** Gunawardena, C. N., Frechette, C., & Layne, L. (2019). Culturally inclusive instructional design: A framework and guide for building online wisdom communities. New York, NY Routledge.

The Interaction Analysis Model to Assess Social Construction of Knowledge Online

(Gunawardena, Lowe, & Anderson, 1997)



Student-Centered Assessment Methodologies at the University of Jaffna

K. THABOTHARAN, UNIVERSITY OF JAFFNA, SRI LANKA

University of Jaffna

- Is very much a traditional University
- Has already adopted SCL principles to its core educational activities
- Has been slowly incorporating online modes of teaching and assessment
- Lots of policy level changes are needed to adopt online based assessments

Assessment components are well defined

Intended Learning Outcomes:	• Apply software engineering principles and practices for the planning and development of a software product • Practice as an effective player of a software project team • Use appropriate tools, principles and best practices for developing an application • Create professional-quality deliverables • Develop an application based on a given set of requirements in order to deploy the application at the client site • Demonstrate abilities to manage pressures and procedures of a team work in an industrial setup
Contents:	• This course unit introduces and applies a range of topics in software engineering and rapid application development in the context of a team project • Students will be assigned to a group of three to four members and each group works to specify, design, implement, and document a software project • The course unit is oriented around directed and self-paced learning, supported by weekly mentoring and discussions
Teaching/Learning Methods:	Mentoring, Small group discussions, Case studies, Presentations, Demonstrations
Assessment Strategy:	• Team Software Project Report ——————————-30% • Software product and deployment of the software ——————40% • Project Presentation and individual viva-voce ——————————30%

Online Assessment Mechanisms

- As of now online based assessments are confined to In-course assessments.
- Some group project activities are done as online based
- Part of the evaluation process is also done using online mode

Group Projects

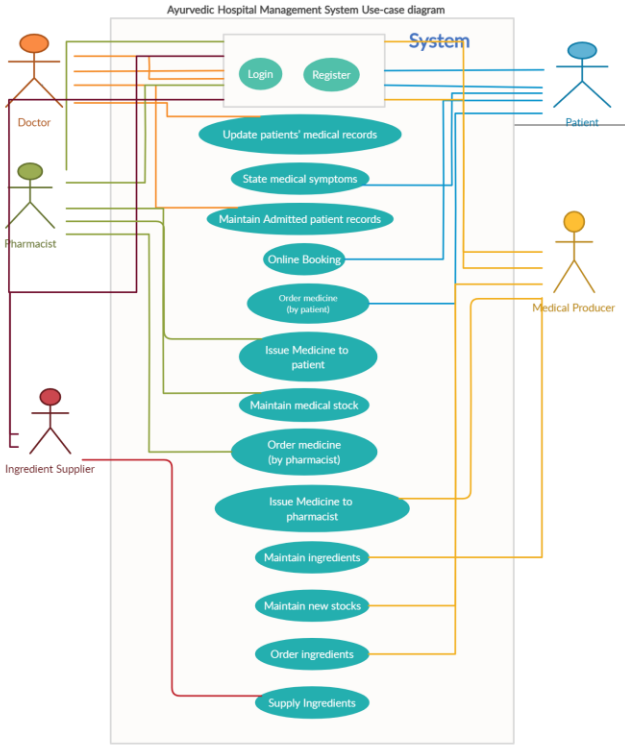
Group Projects have multiple aims:

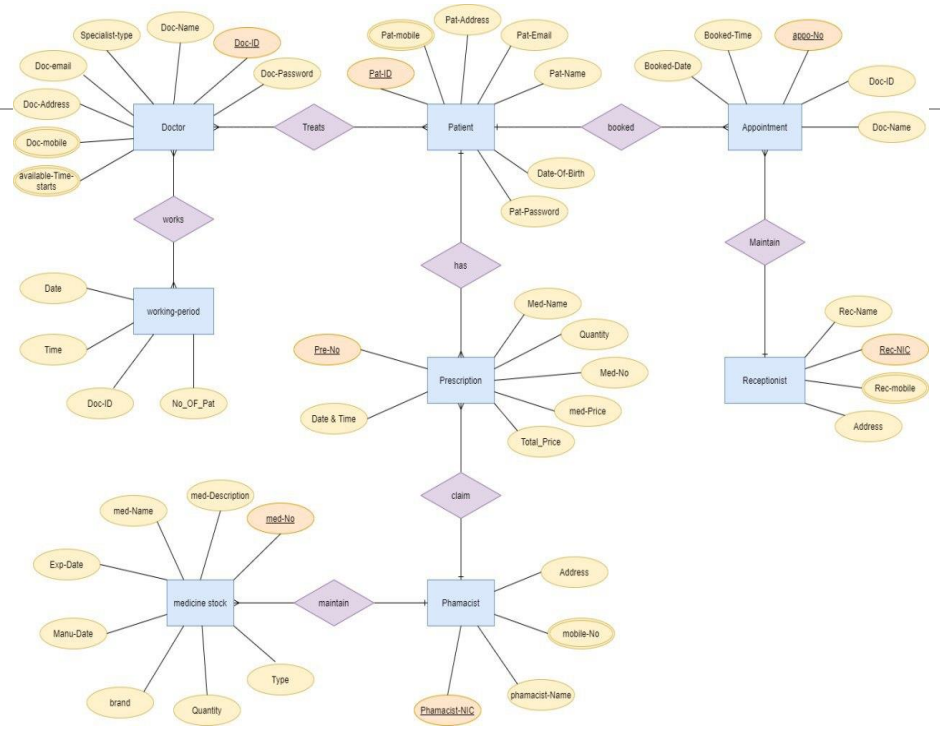
- Gives students opportunity to apply theoretical knowledge to solve a real world problem
- Enable students to develop a completed product
- Work together as a group and collaborate
- Involve students in a more focused small-group activity
- Teachers can give more attention to a small group of students
- Additionally it also develops skills such as gathering resources, presenting, working under deadlines

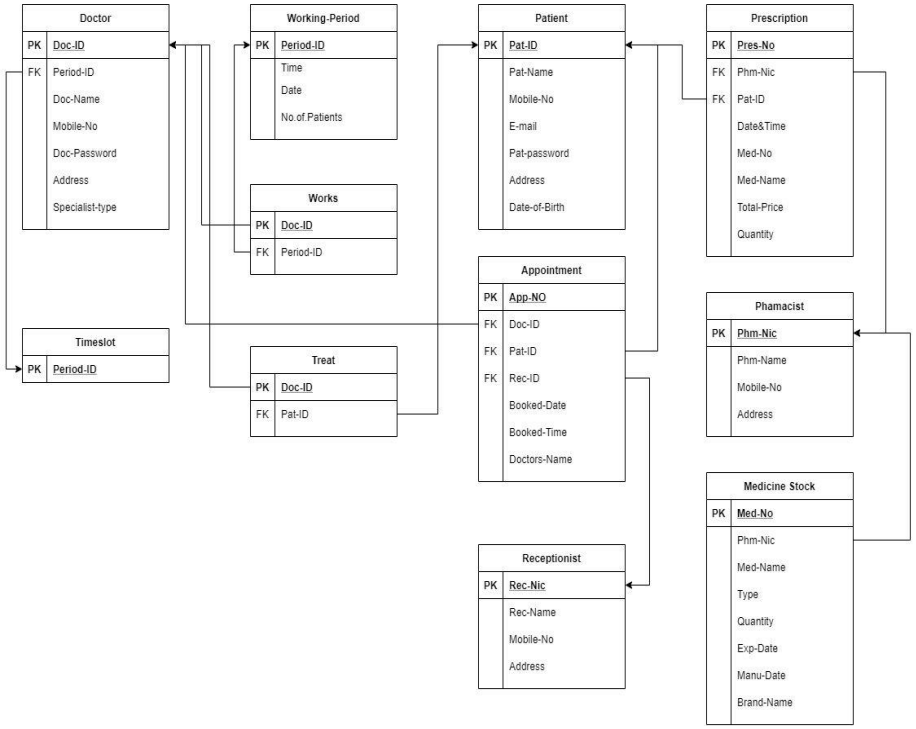
Online Based Assessment Methodologies

- LMS and Github based submission of progress of group projects in subjects such as Computer Science, using online modes
- Students have scheduled timings during the week and will have to present their achievement
- Diagrams describing the requirements identification, development cycle phase, the entity relationship diagrams have to be presented

Group projects – student submissions







Technologies for Assessment

LINDA BARRIL, UNIVERSITY OF NEW MEXICO, USA

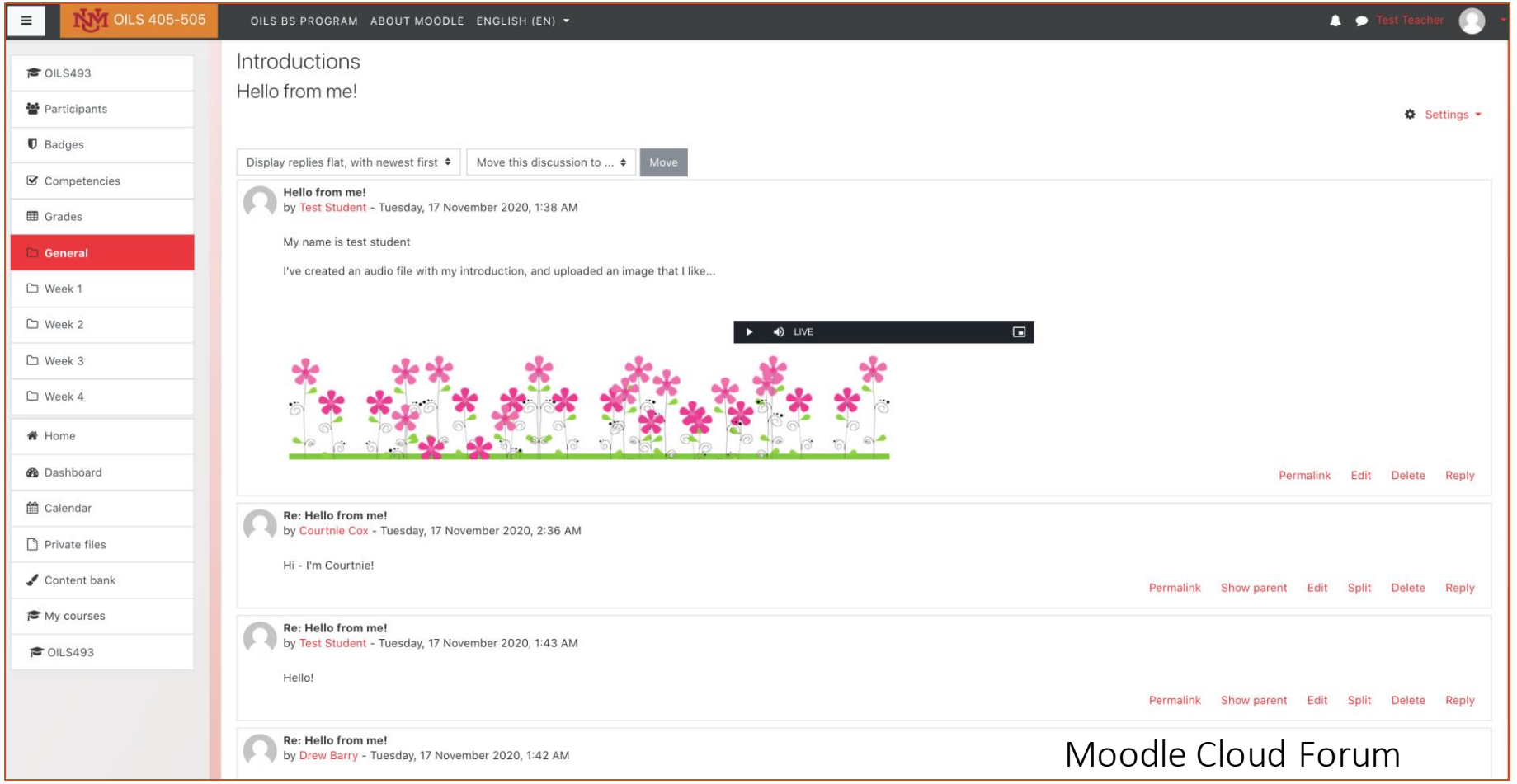
Technologies for Assessment

Online Courses ~ LMS*

Automatically preserves all ***documentation*** of individual **and** group work

Provides resources

- Learning
- Assessment



Moodle Cloud Forum

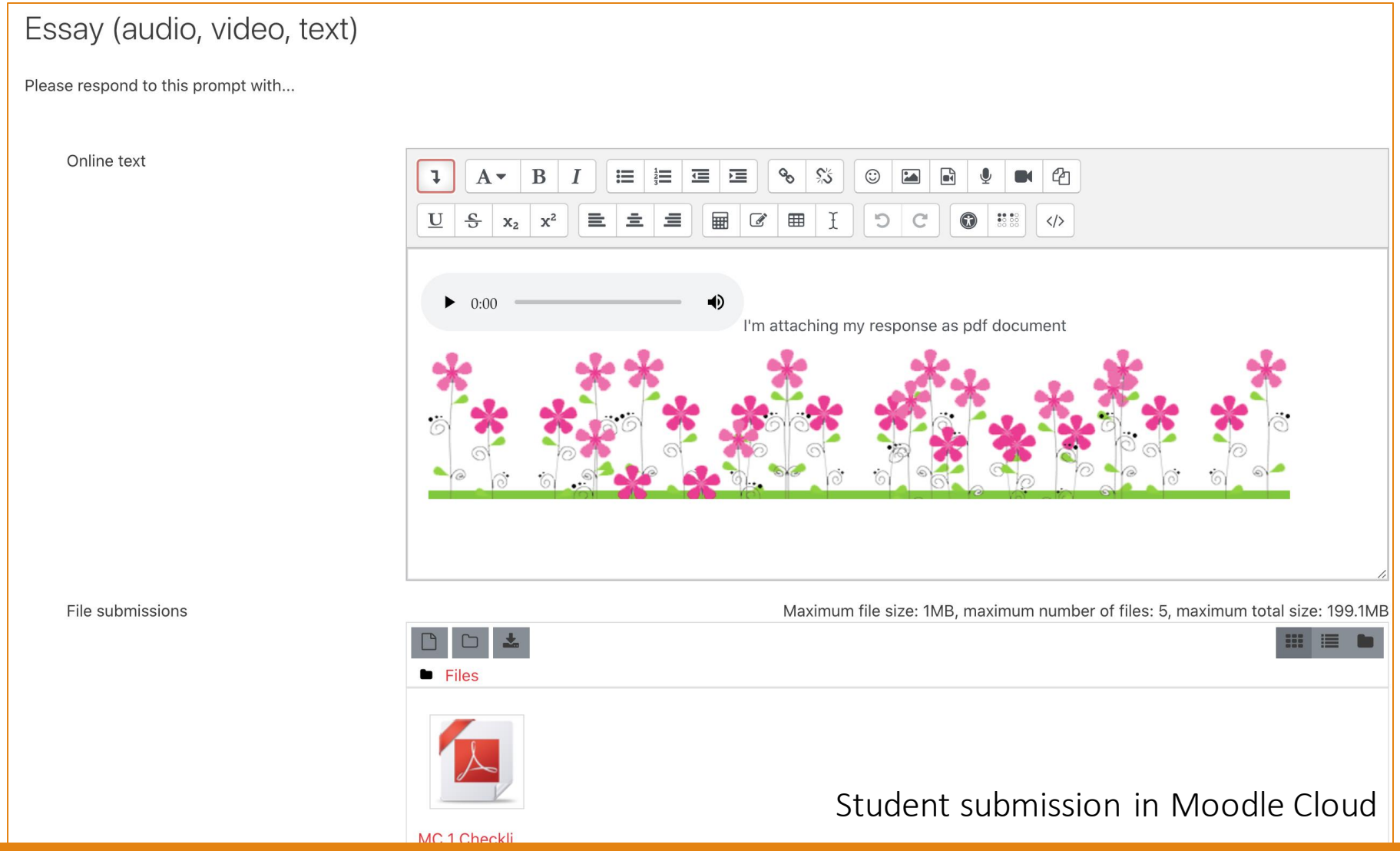
* Learning Management System

Technologies for Assessment

Online Courses ~ LMS

Students can submit multimedia work in multiple formats using the text editor

- Online Text
- File Upload
- Video
- Audio
- Graphics



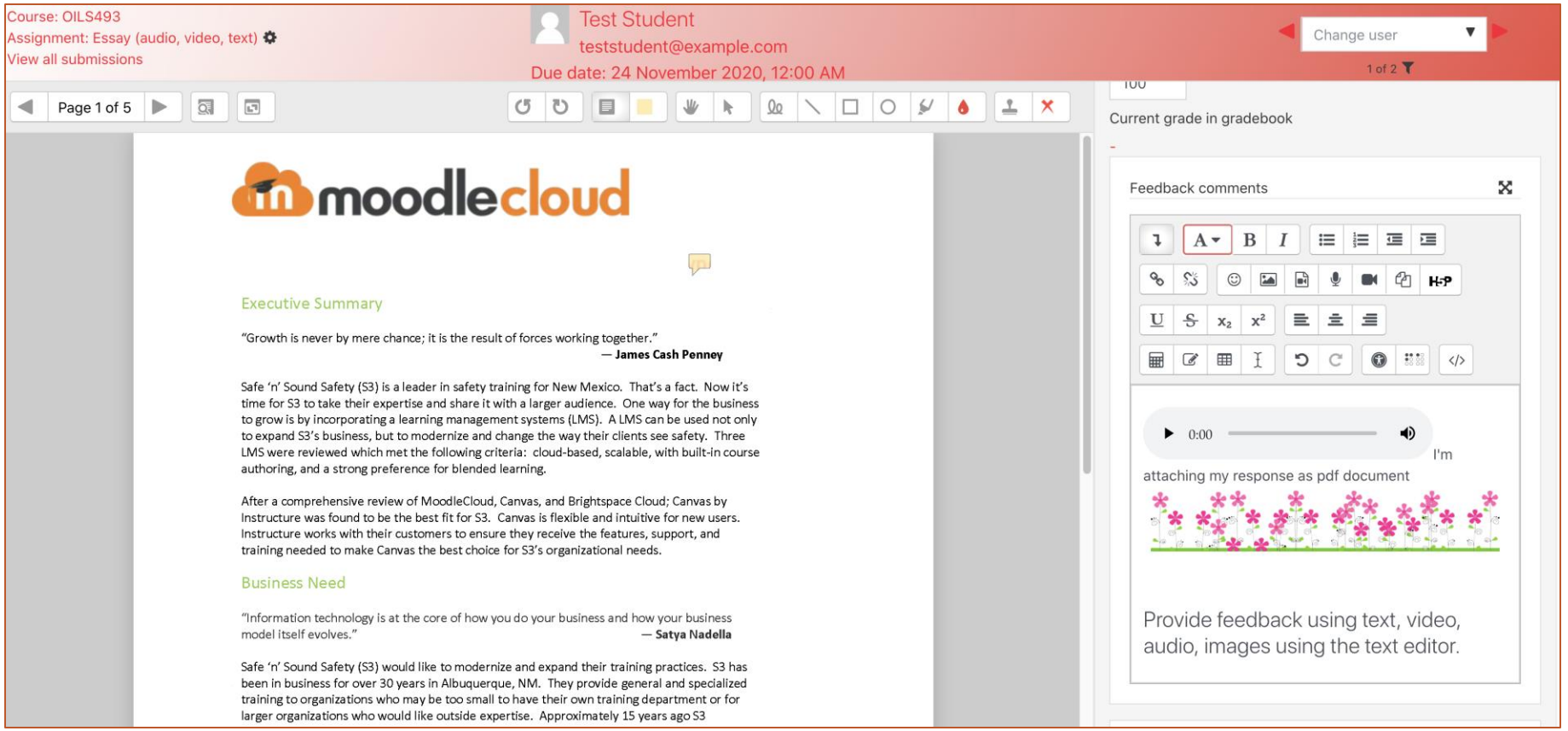
Student submission in Moodle Cloud

Technologies for Assessment

Online Courses ~ LMS

Instructors can provide multimedia feedback in multiple formats using the text editor

- Online Text
- File Upload
- Video
- Audio
- Graphics



MC Grade Book Text Editor

Technologies for Assessment

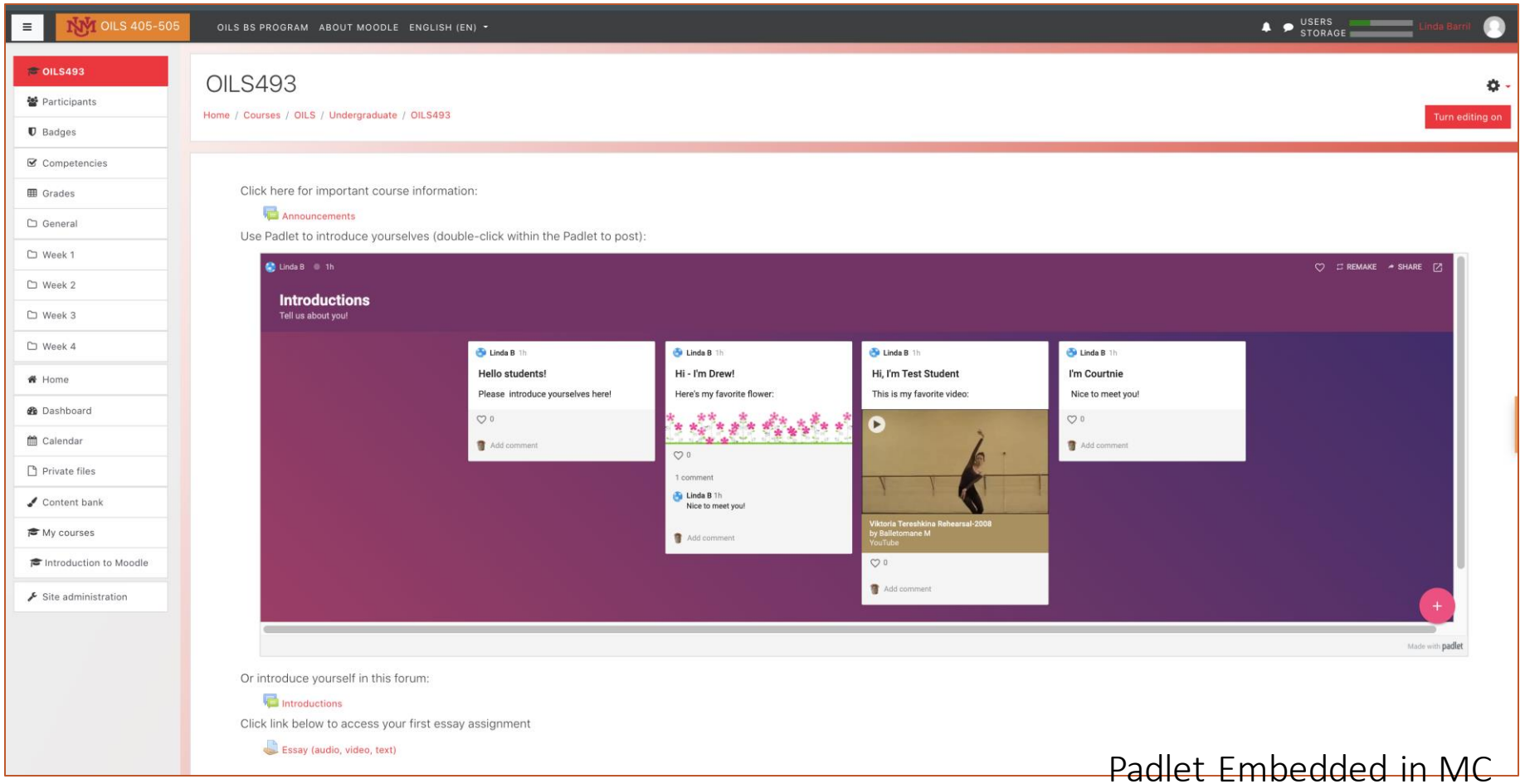
LMS Applications

- Discussion forum ~ Chat
- Web-conference (BigBlueButton, Zoom)
- Journal ~ Wiki ~ Blog
- Video recording (PC, mobile)
- Audio recording (PC, mobile)
- Document creation (MS Office, Google Docs/Sheets/Slides/Forms)
- Graphics (PC, mobile; Wikimedia)
- Embed social media (Twitter)
- Embed social collaboration apps (Padlet, Popplet)

Technologies for Assessment

Collaborative Applications

Supports social ***interaction*** *and* ***engagement***



Padlet Embedded in MC

Technologies for Assessment

Assessing Collaborative Work/Individual Participation

General feedback ~ **Public Space**

- Positive – Supportive
- Social presence
- A/Synchronous
  - Within tool (discussion, chat, web-conference)

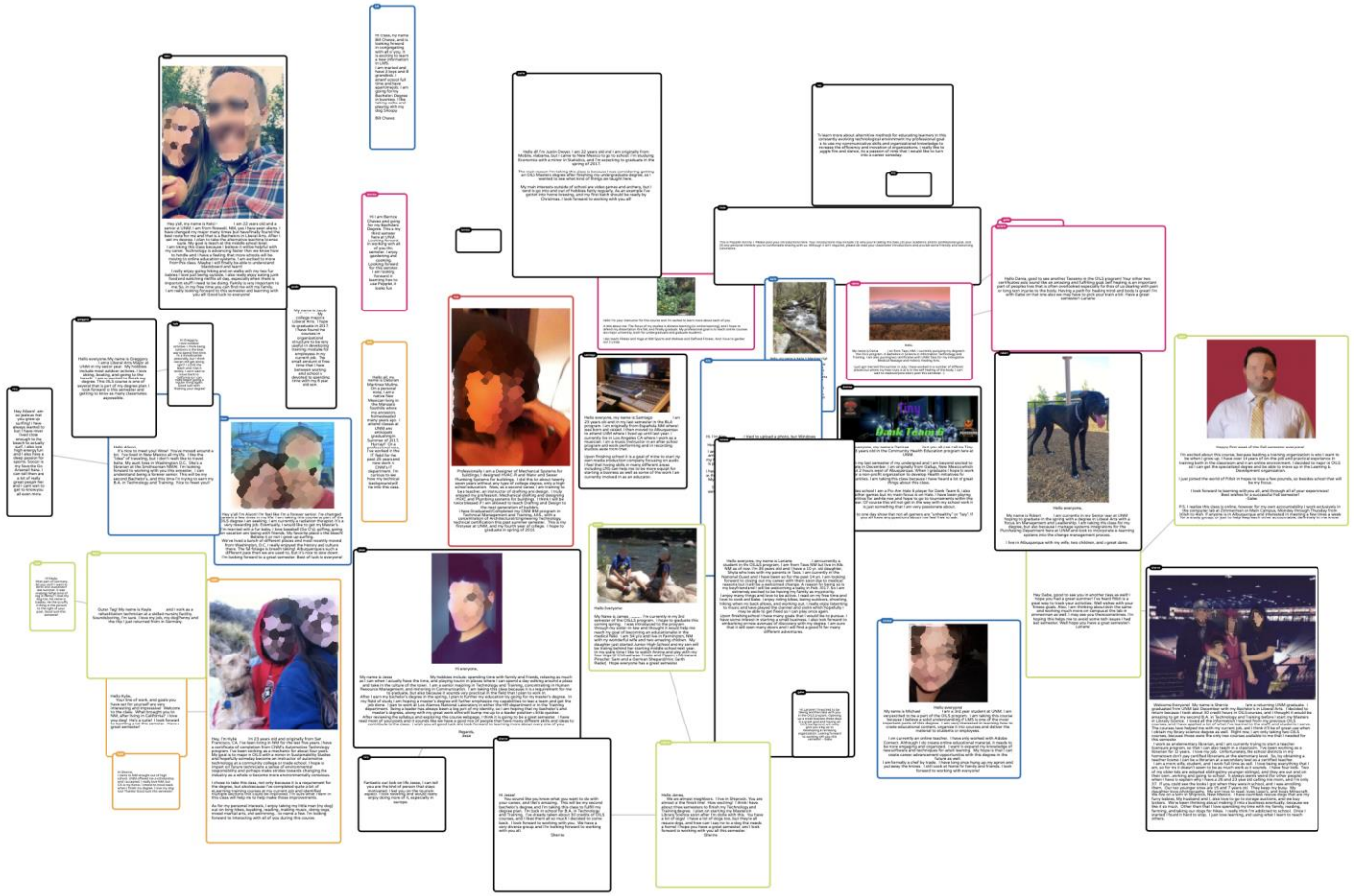
Formal feedback ~ **Private Space**

- Detailed - focus on guidance/improvement
- Self and Group Evaluation (e.g., WisCom)
- A/Synchronous
  - One:one or small group (Skype, Zoom, BBB, Chat)
  - Grade Book

Text, audio, video, graphic

Technologies for Assessment

Collaborative Applications

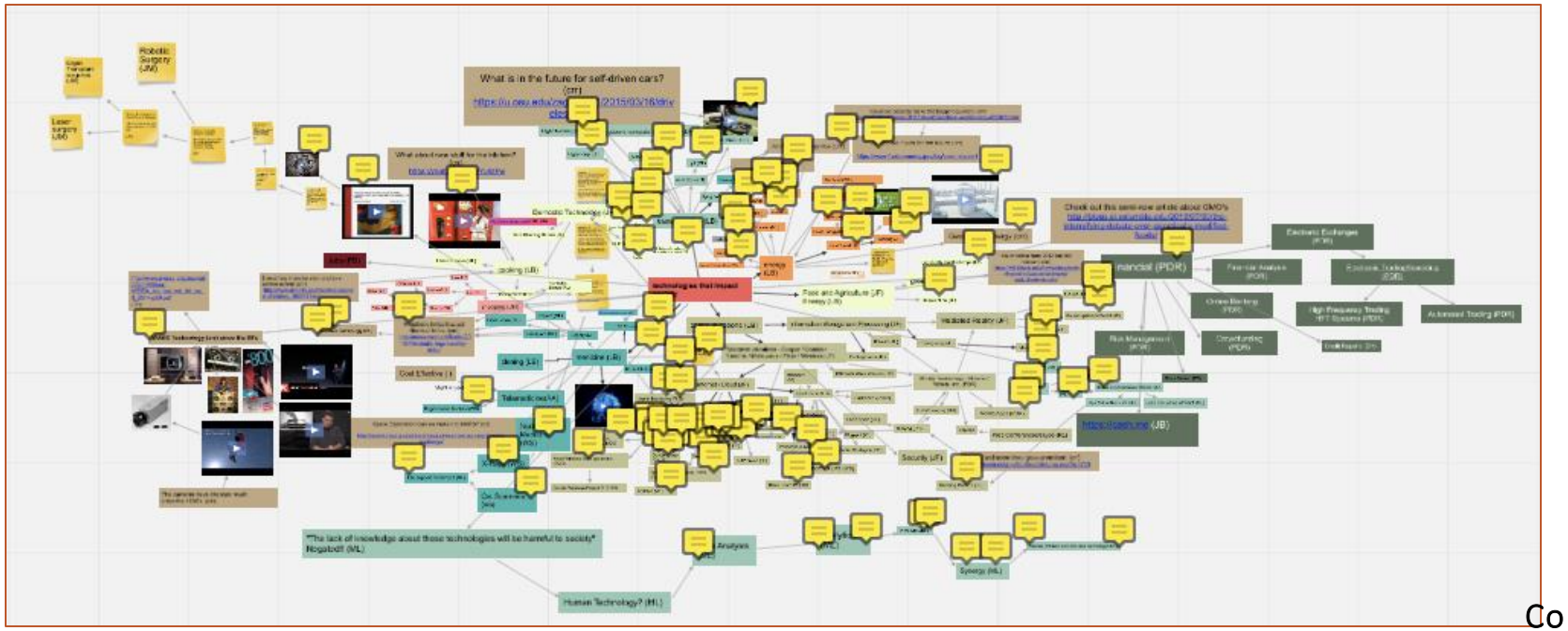


Course: *Production & Utilization of Instructional Materials (OILS 421)*
Platform: Poplet (Poplet.com)

Goal: Class introductions to build learning community and increase interest/engagement (non-linear)
Task: Students post their introductions with encouragement to share images, videos, links, etc.
Benefit:
Students: Creative engagement in non-linear, freeform work space supports greater participation/more authentic interaction
Students: Work may be saved as learning/instructional resource (download)
Instructor: Demonstrate social presence (providing positive, supportive general feedback)
Instructor: Source for providing personalized, private assessment feedback to students

Technologies for Assessment

Collaborative Applications



Course: *Technological Change & Society (OILS 481)*

Platform: Miro (Miro.com)

Goal: Research, explore & share every technology without repetition

Task: Collaborative brainstorming concept map creation

Benefit:

Students: Creative engagement in non-linear, freeform work space supports greater participation/more authentic interaction

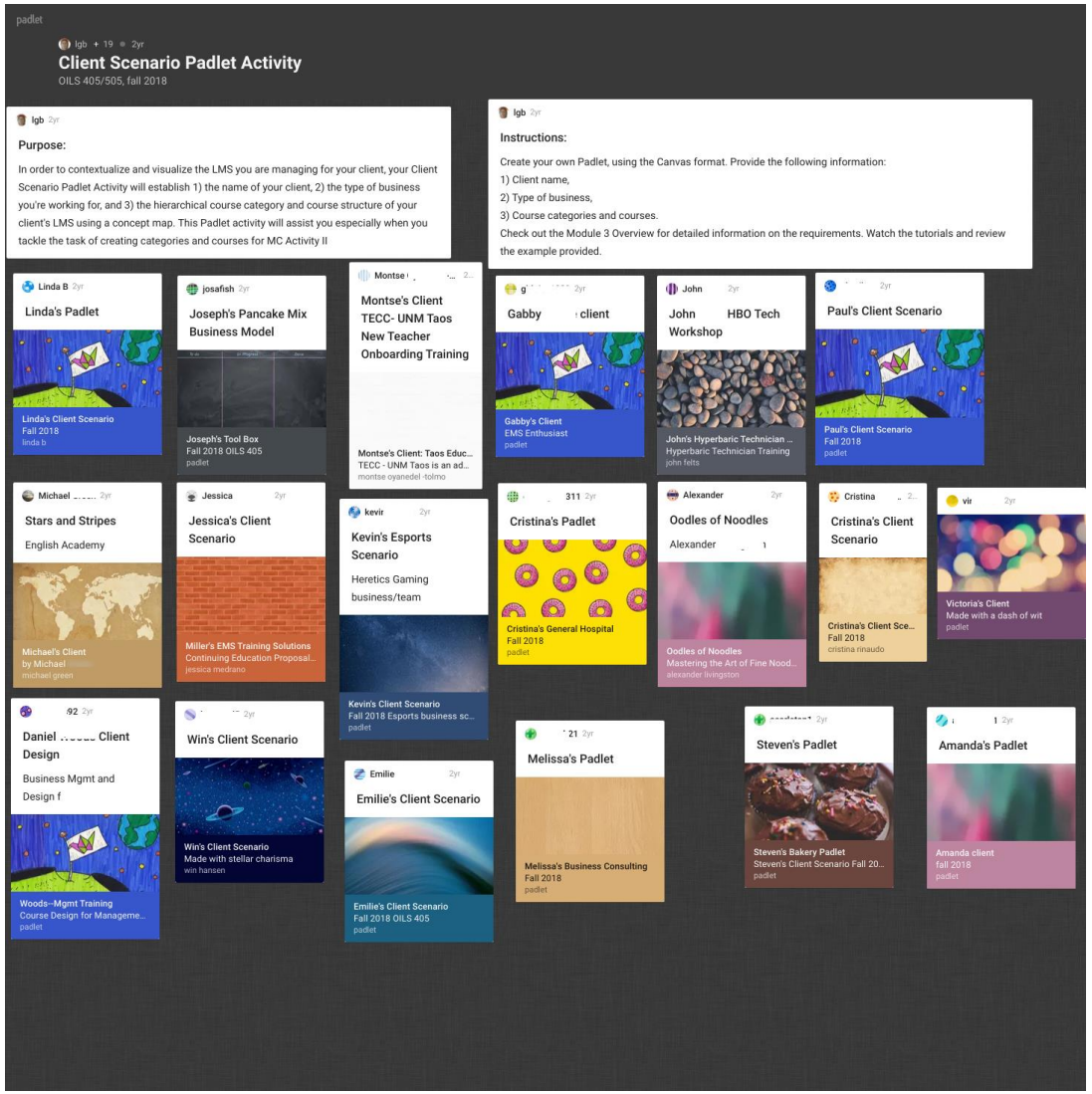
Students: Work may be saved as learning/instructional resource (download)

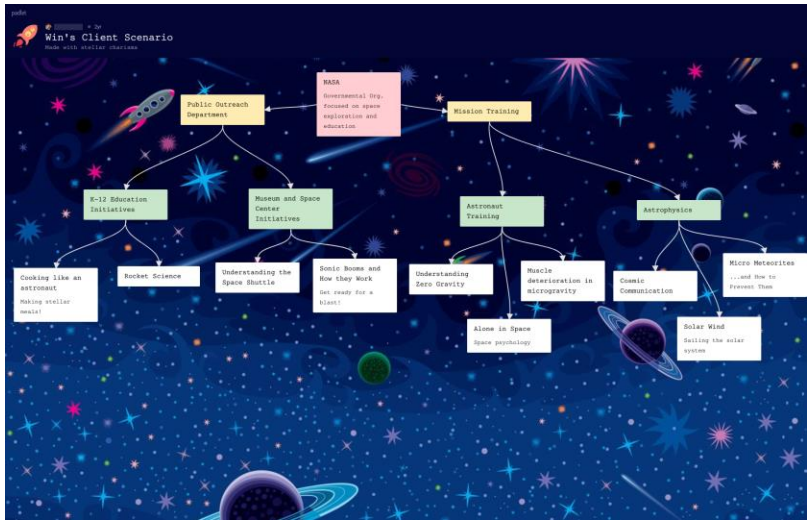
Instructor: Demonstrate social presence (providing positive, supportive general feedback)

Instructor: Source for providing personalized, private assessment feedback to students

Technologies for Assessment

Collaborative Applications





Student example

Course: Management of eLearning Systems (OILS 405/505)

Platform: Padlet (Padlet.com)

Goal: Learn LMS Site Administrator skills: Set-up backend categories and course structure before building them in MC LMS

Task: Create individual storyboard concept map of categories and course structure for a fictitious, or real, organization/client

Benefits:

- ***Students:*** View peers' work to support their learning & enhance understanding
- ***Students:*** May be saved as instructional resource (download)
- ***Instructor:*** Social presence (providing positive, supportive general feedback)
- ***Instructor:*** Provides personalized private assessment feedback to students

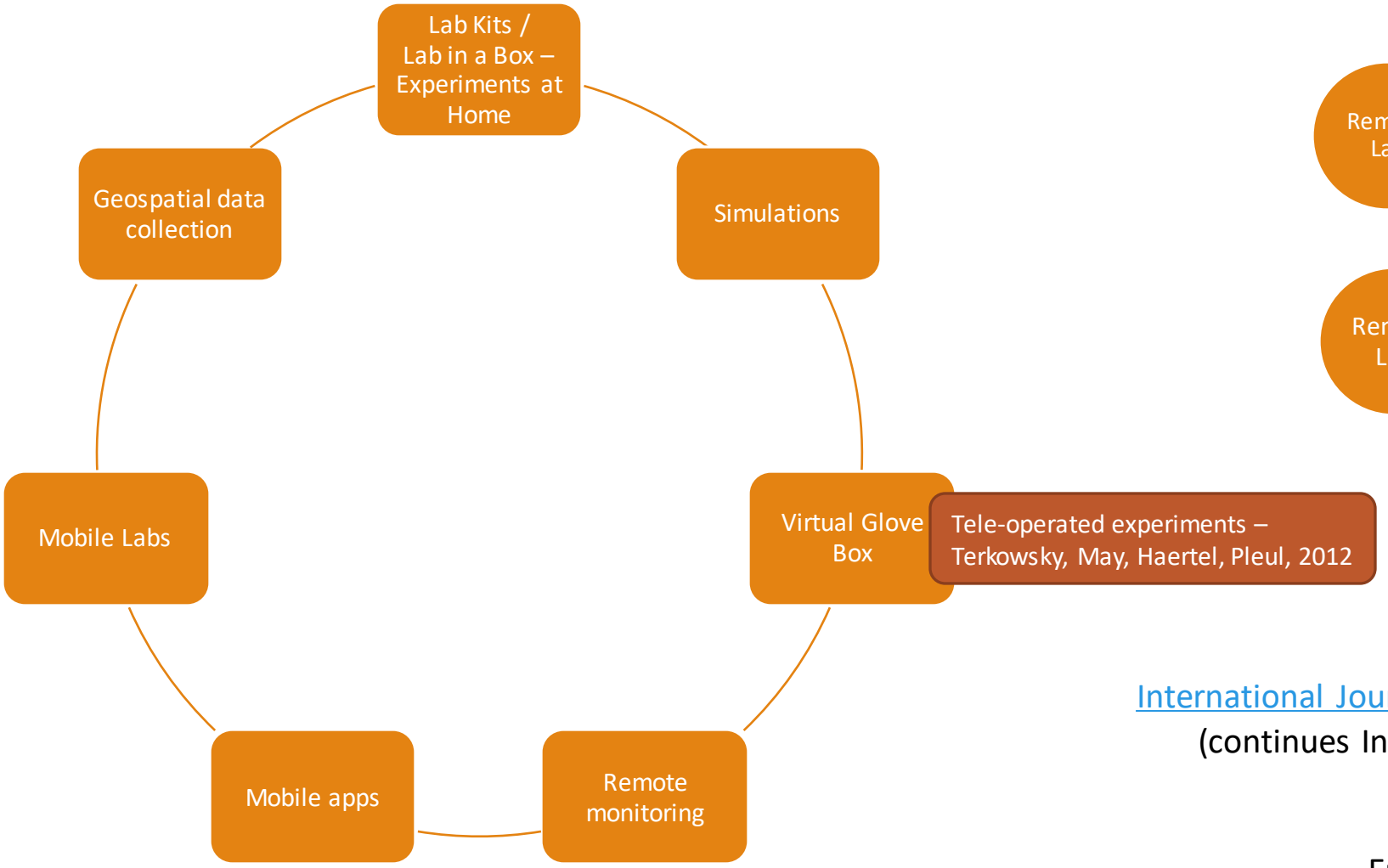
Assessment for Learning

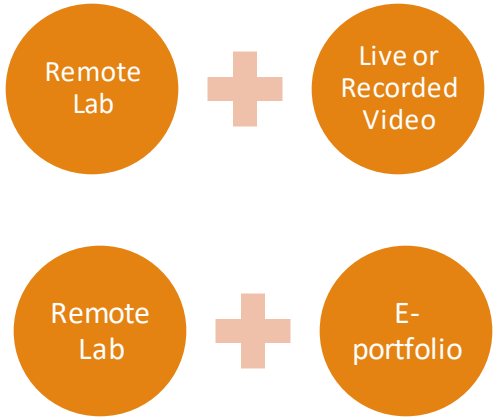
Labs & Art Online – Assessing Practicals

EXPERIMENTS AND SIMULATIONS

STEPHANIE L. MOORE, UNIVERSITY OF NEW MEXICO, USA

Remote Labs





International Journal of Online and Biomedical Engineering
(continues International Journal of Online Engineering)

Special issues forthcoming in:
European Journal of Engineering Education
Journal of Computing in Higher Education

Heriot Watt University, United Kingdom

Guide on online and blended labs, studios, and fieldwork:

https://lta.hw.ac.uk/wp-content/uploads/03_RBL_Practice-based-activities.pdf

Includes a planning guide, ideas, and links to resources, media articles, and academic articles

Labs in STEM subjects

- Home labs
- Lab recordings
- Lab simulations
- Remote Labs
- Citizen Science

Studios & Workshops in Design Subjects

- Social media (Pinterest)
- Virtual studios

Fieldwork

- Local field trips
- Broadcasts from the field
- Virtual field trip (capture real world data / pictures / cartography / other info
- Virtual museum tours

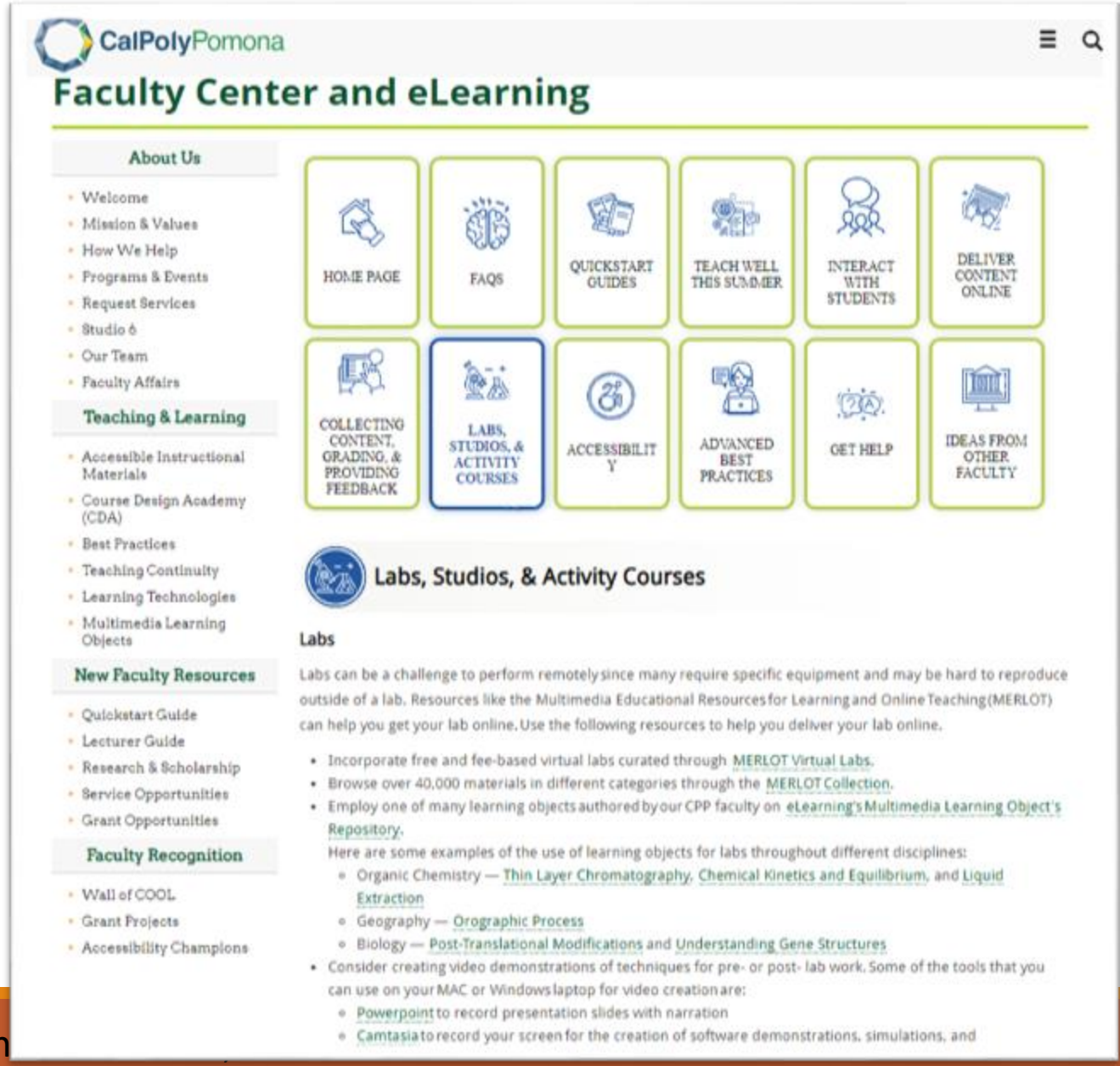
California State Polytechnic University, Pomona, CA

Website with a lot of examples and resources:

https://www.cpp.edu/facultycenter/teaching-continuity/labs-studios-and-activity-courses/

*Labs * Studios * Activity Courses*

Multimedia Learning Objects Repository – various visualizations, animations, simulations and other learning objects

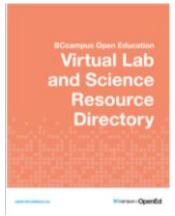


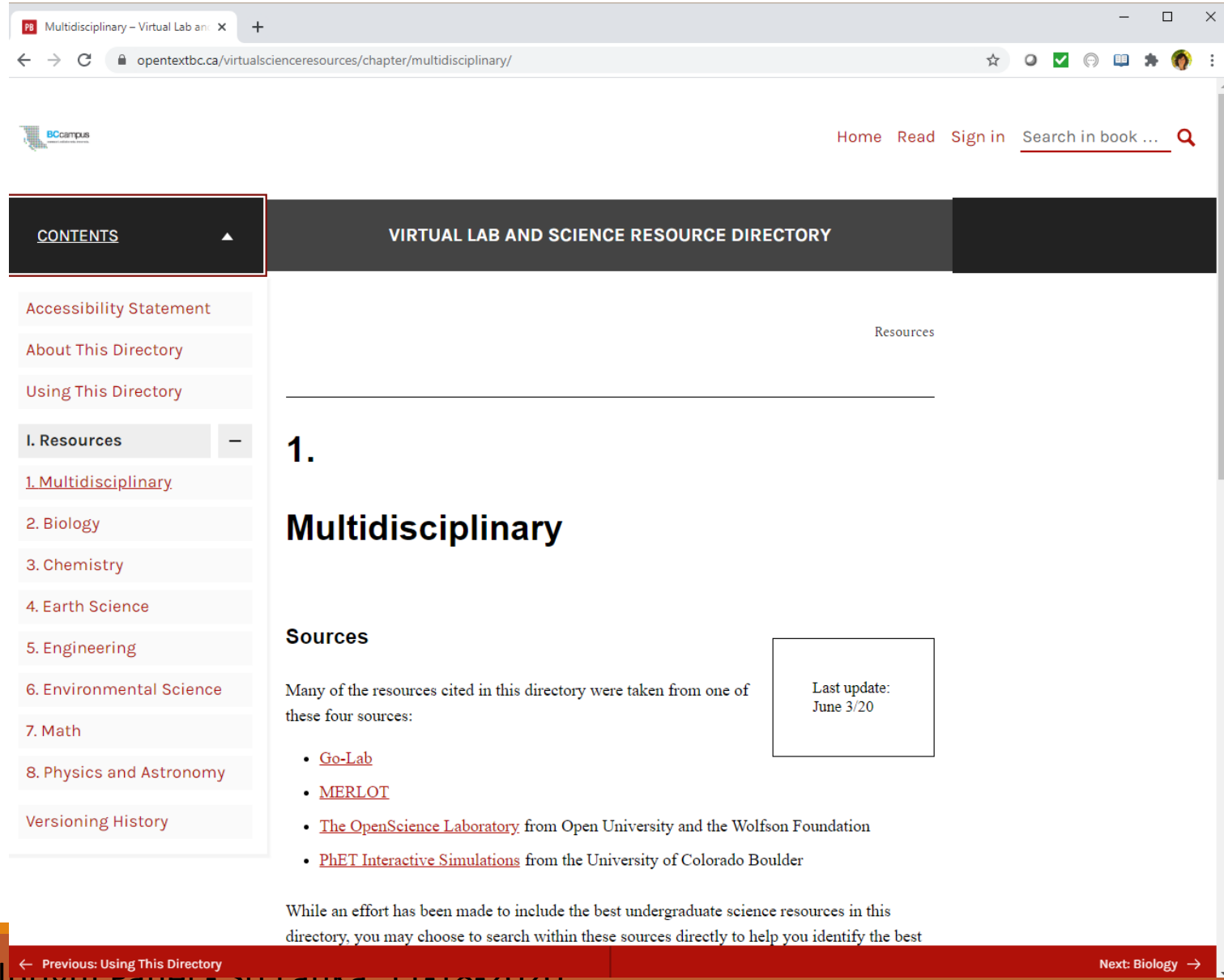
BCcampus – British Columbia, Canada

Virtual Labs for Science Education (overview of how they developed virtual labs):

https://bccampus.ca/2020/06/18/spoiled-for-choice-virtual-labs-for-science-education/

Extensive Open Text – Virtual Lab and Science Resource Directory - https://opentextbc.ca/virtualscienceresources/





Irish Universities Association

Enhancing Digital Teaching & Learning (EDTL) – Considerations for Lab-based Subjects

Infographic on process for developing remote labs

https://edtl.blog/the-edtl-approach/edtl-approach-considerations-for-lab-based-subjects/

Site features:

Case Studies

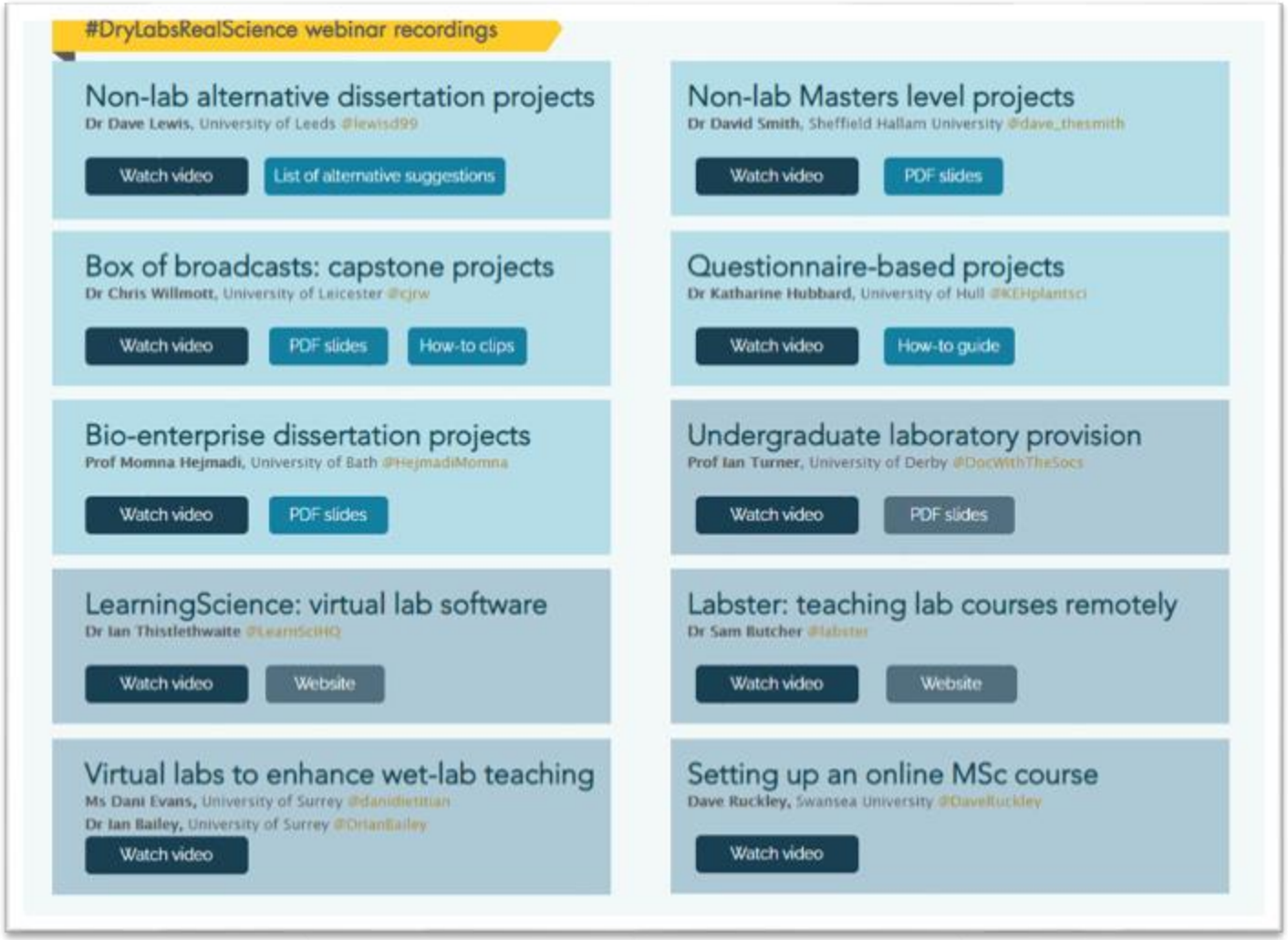
Resources

Exemplars (videos)

Lecturemotely – webinar series

Webinars specifically on lab courses:

https://www.lecturemotely.com/copy-of-lab-courses

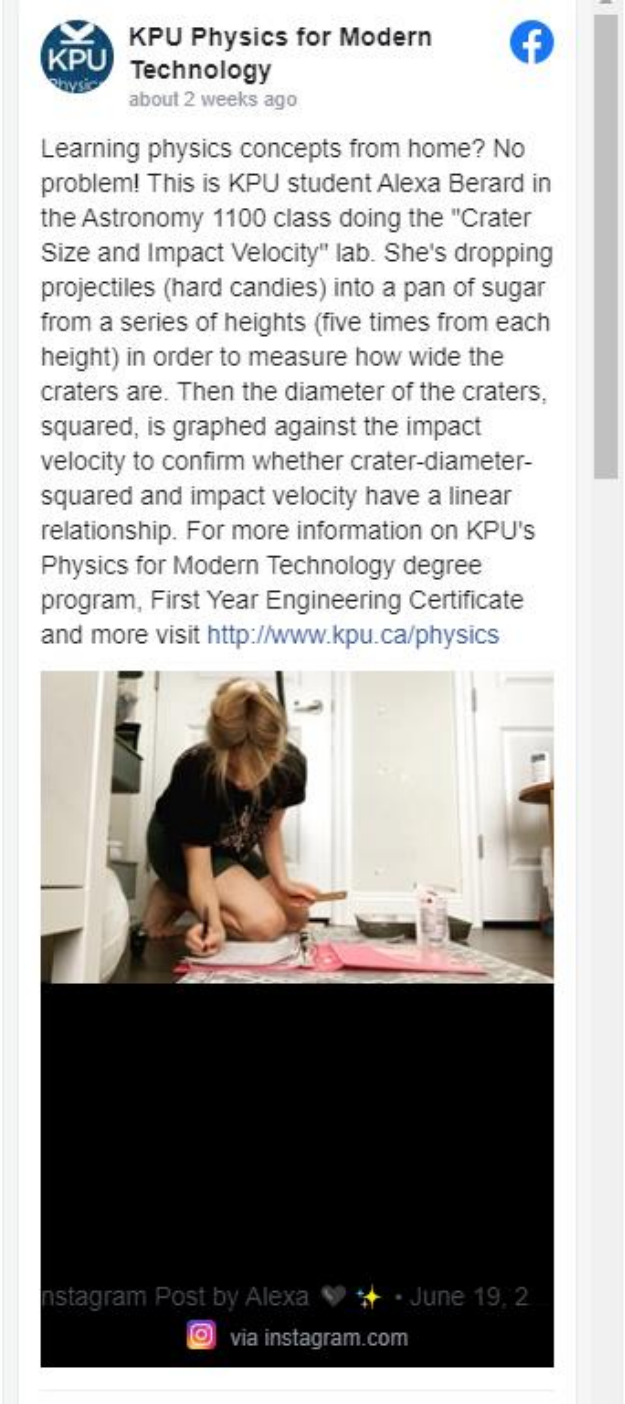


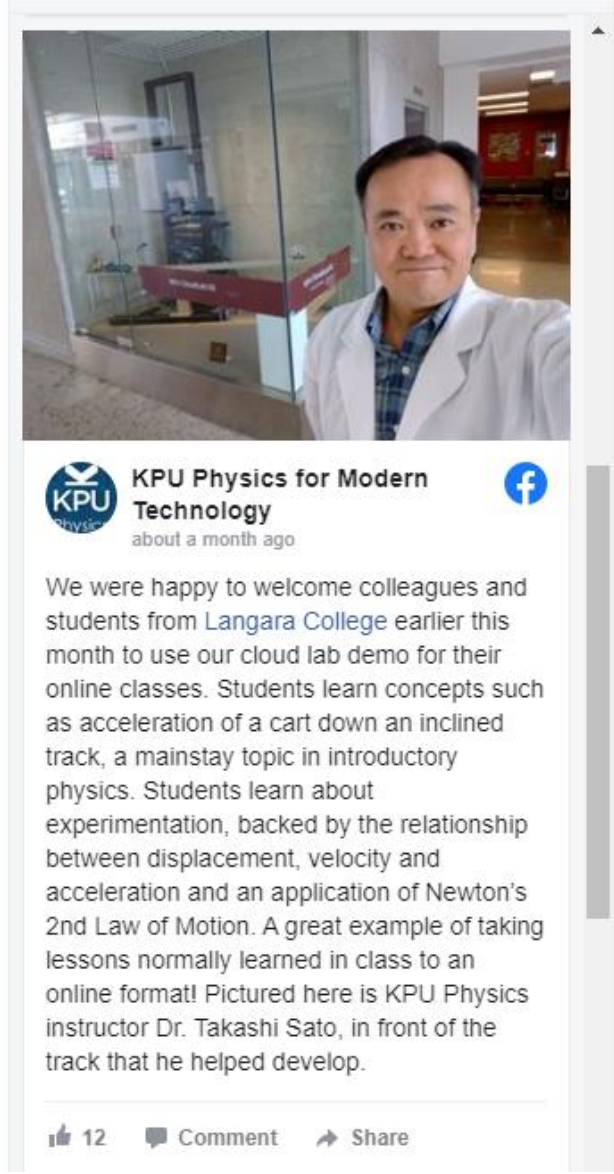
Kwantlen Polytechnic University, Canada

Physics – students received a kit and completed experiments at home, recording and sharing those experiments back with the instructor

Astronomy – experiments at home, simulations

Brief video showing examples:
https://www.youtube.com/watch?v=uG4Ho5gRpBQ&feature=youtu.be





https://www.kpu.ca/physics

University of Technology Sydney
in Australia

Optics Lab – hybrid social distancing with 10 students in the lab and 10 students online in MS Teams and mirroring software
- students swap positions each lab
- some students are in permanent distance positions, so they complete the labs fully online

The Open University,
UK

http://www.open.ac.uk/blogs/design/using-remote-and-onscreen-laboratories-in-online-learning/

Resources

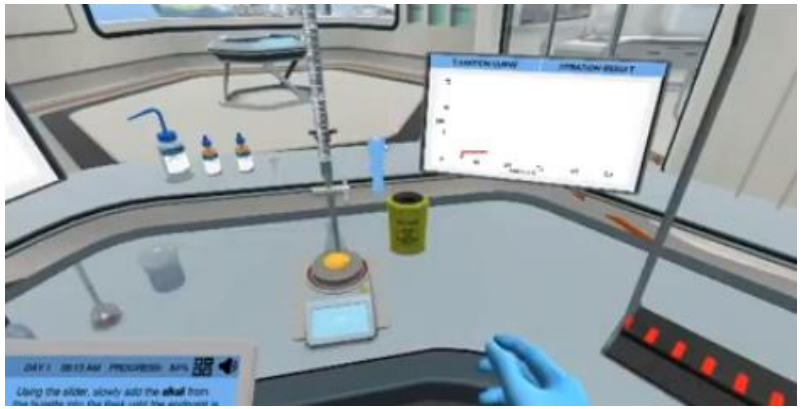
MERLOT Virtual Labs - https://virtuallabs.merlot.org/

MERLOT Materials - https://www.merlot.org/merlot/materials.htm?page=1&keywords=&sort.property=overallRating&category=

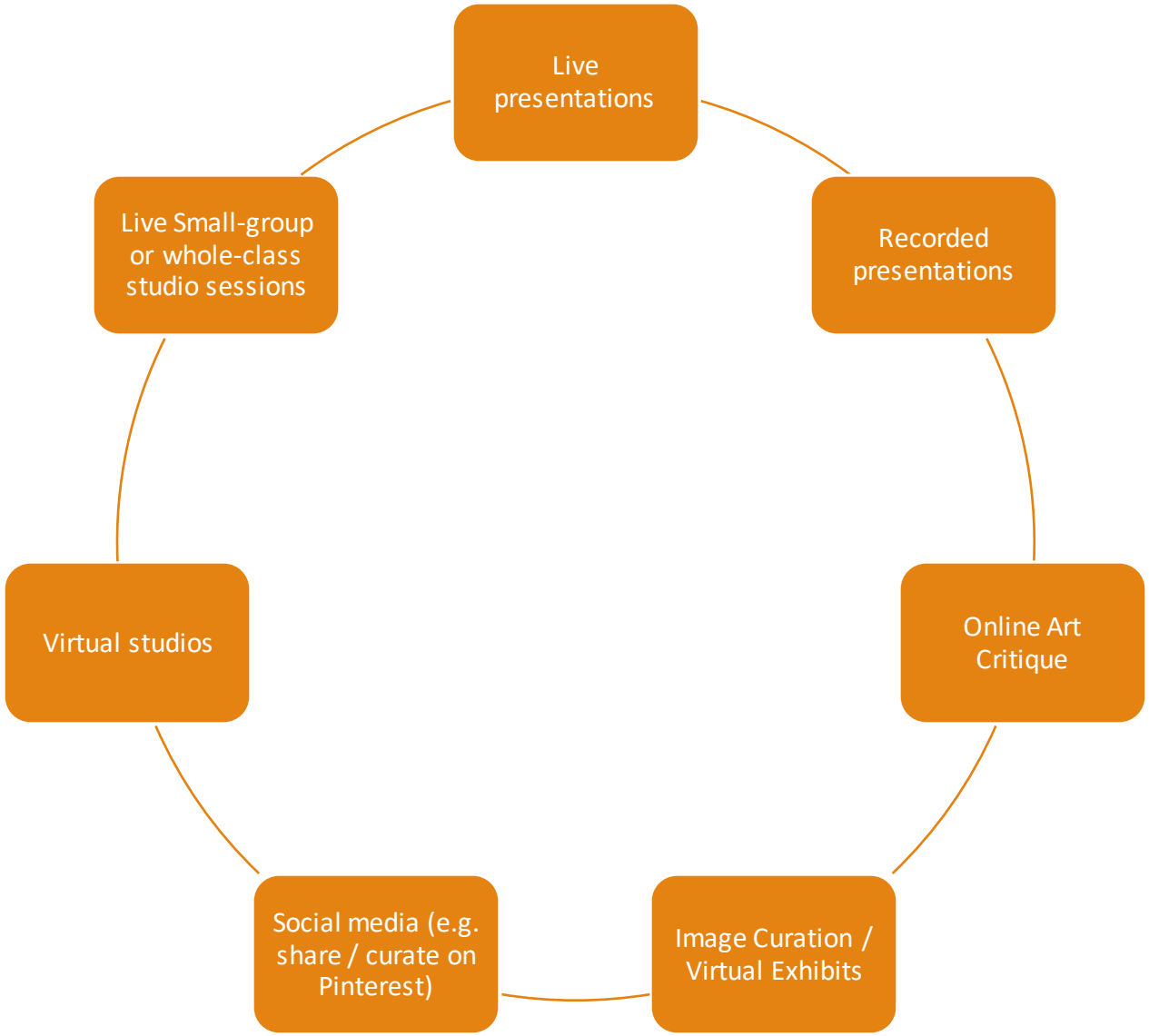
PhET Simulations - https://phet.colorado.edu/; Remote Learning Tips (GoogleDoc)

LabXchange - https://www.labxchange.org/ - created by Harvard

Labster - https://www.labster.com/ - virtual labs and ability to create your own simulations



Art & Studio-based Classes



VoiceThread

Social media tool

Discussion board in LMS

Live video chat (Zoom, Collaborate, WebEx, others)

Video recording tool in the LMS – either for assignment submission or for discussion submission

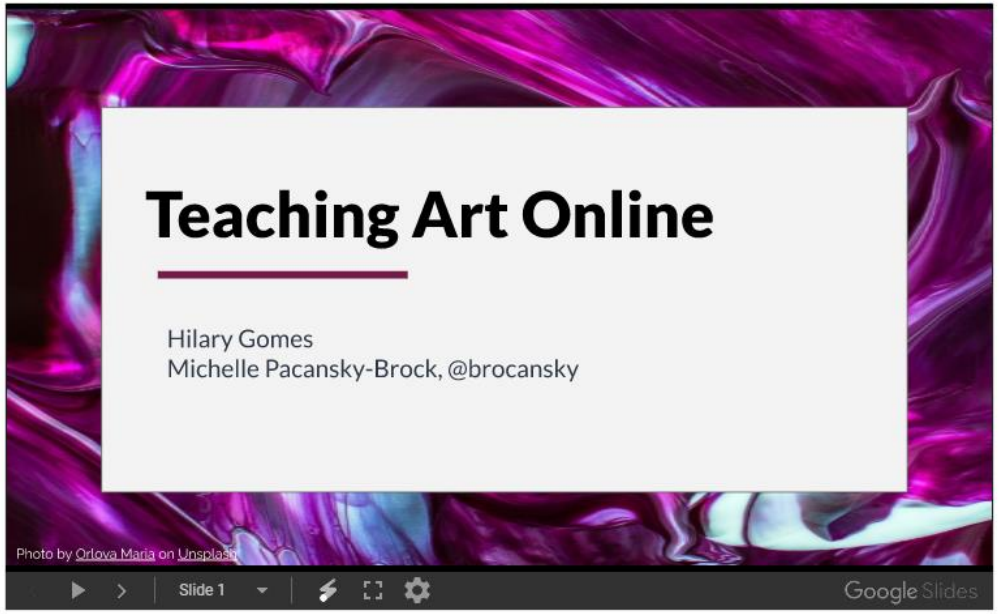
Virtual Exhibit tools -
https://exhibbit.com/home/
https://www.artsteps.com/
https://www.3dvas.com/

Digital portfolios

Teaching Art Online –

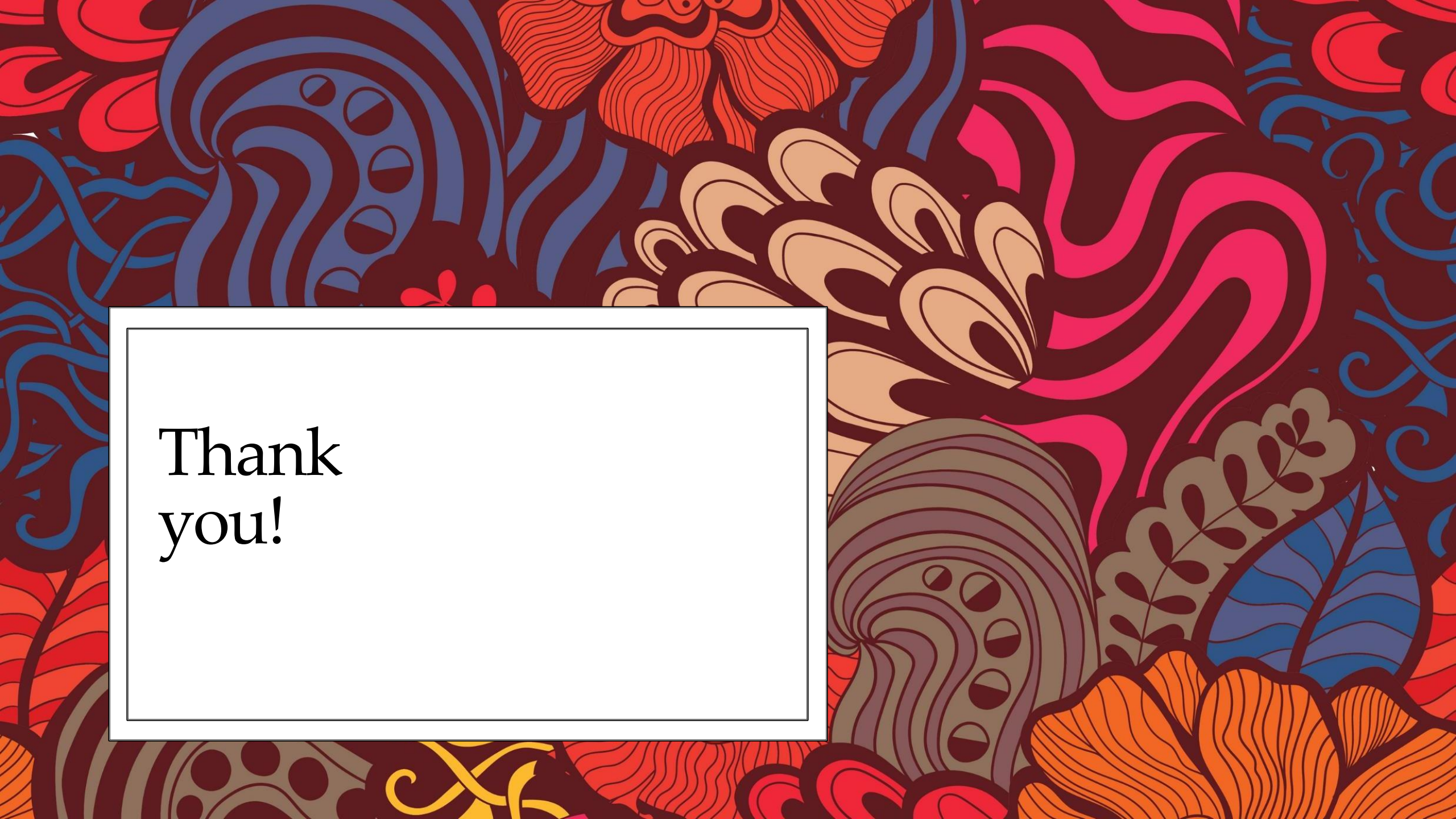
Gomes and Pacansky-Brock

https://sites.google.com/view/teachingartonline/teaching-demos?authuser=0



Direct Links to Featured Resources

- Video: Online Art Critique Demonstration (Hilary)
- Video Demo: Image Curation Activity + Canvas Discussion (Michelle)
- Instructions: Image Curation Activity (Michelle)
  - Assignment details (from Canvas) for the Image Curation, Review and Reflect, and Canvas Discussion


Thank
you!

References

Assessment & Taxonomies:

Anderson, L. W., Krathwohl, D. R., & Bloom, B. S. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of educational objectives* (Complete ed.). New York: Longman.

Chappuis, J. and Stiggins, R.S. (2016). *An introduction to student-involved assessment FOR learning, 7th ed.* Pearson.

Stiggins, R.J., and N. Conklin. 1992. In Teachers' Hands: Investigating the Practice of Classroom Assessment. SUNY Press.

Online Learning Research:

Gunawardena, C. N., Frechette, C., & Layne, L. (2019). *Culturally Inclusive Instructional Design: A Framework and Guide for Building Online Wisdom Communities.* New York: Routledge. https://www.colectivo.io/

Gunawardena, C. N., Lowe, C. A., & Anderson, T. (1997). Analysis of a global online debate and the development of an interaction analysis model for examining social construction of knowledge in computer conferencing. *Journal of Educational Computing Research,* 17(4), 395-429.

Means, B., Bakia, M., & Murphy, R. (2014). *Learning online: What research tells us about whether, when and how.* New York: Routledge.

Examples and Resources

A COMPILATION OF NUMEROUS EXAMPLES AND RESOURCES ACROSS DIFFERENT SUBJECT AREAS AND TYPES OF COURSES

Framework for 21st Century Learning

Learning & Innovation Skills – The 4C's

- Critical Thinking and Problem Solving
- Communication
- Collaboration
- Creativity and Innovation

Information, Media & Technology Skills

- Information, Media & ICT Literacy

Life & Career Skills

- Flexibility & Adaptability
- Initiative & Self-Direction
- Social & Cross-Cultural Skills
- Productivity & Accountability
- Leadership & Responsibility

Strategies to Address Cheating

A COMPILATION OF NUMEROUS EXAMPLES AND RESOURCES ACROSS DIFFERENT SUBJECT AREAS AND TYPES OF COURSES

What can you do – Course (re)Design

STRATEGY – MULTIPLE SMALL ASSESSMENTS

Lowers the stakes while maintaining accountability

Shifts the emphasis from performance to mastery (not a single point in time but what you accomplish over time)

Cumulative module tests – then don't need a final

Use different types of assessment (mixed approach)

BETTER FOR LEARNING

Testing is a learning strategy (outperforms studying)

Spaced repetition and retrieval

Knowledge less likely to be inert (students less likely to "binge-and-dump")

Culture Matters

Students who cheat are rarely dishonest in other contexts

- Cheating is strongly driven by the class environment

Students will cheat "just enough" so they don't feel bad about themselves

Priming and Timing

- Ten commandments experiment
- Sign statement or recite the honor code at the start of an exam or before submitting an assignment (UVA has an honor code and we have students sign or cite that with every assignment)

Creating the Culture You Desire

Talk With Your Class	Institutional Strategies

➢ Let them know systemic cheating is rare (establishes cultural norms)
 	
➢ Help them understand why you care about that and why they might want to as well
 	
➢ Be clear about what constitutes cheating and what the penalties are, and about your commitment to consistent treatment
 	
➢ Tell them in your experience, students can avoid the temptation to cheat by keeping up with the work and asking for help when readings, lectures, and class activities aren't making sense
	➢ Engage students in creating or leading efforts around an honor code
	
	➢ Integrate your honor code into the fabric of your institution
	  ➢ Have students write it or sign it for assignments
	  ➢ Ask a famous alum to record a video (we have Katie Couric)
	  ➢ Incorporate it into student orientations
	
	➢ Create an education campaign to communicate the same class conversation but across campus

Plagiarism Tutorial and Certificate

Free, online from Indiana University:

https://plagiarism.iu.edu/certificationTests/

Assessment – Ideas for Online

Remember	Understand	Apply	Analyze	Evaluate	Create	Affective Domain

Knowledge

- Facts and concepts we want students to know
- Selected Response

Examples for online:

- Quiz or test tools (objective items)
- Audio voice threads (e.g. language instruction)
- Recitations (record something that has to be memorized)

Reasoning

- Students use what they know to reason and solve problems
- Constructed Response or Extended Response

Examples for online:

- Quiz or test tools (open-ended items)
- Sorting activities
- Record solving a problem and submit that recording
- Paper on a topic
- Presentation on a topic (record and submit as assignment or share in a discussion forum)
- Case studies requiring students to apply course content and derive a solution

Skills

- Students use their knowledge and reasoning to perform a task skillfully
- Performance Assessment or Demonstration

Examples for online:

- Students record themselves performing a skill (e.g. a lab, an exercise routine, a talk-aloud on their design process for a product) (assess using a rubric)
- Students perform a skill during a live video session (e.g. labs) (assess using a rubric)
- Simulation or role playing

Products

- Students use their knowledge, reasoning, and skills to create a concrete product
- Product

Examples for online:

- Students complete a project – individually or as a group – and submit (assess using a rubric)
- Students construct a writing sample – individually or together – on a wiki or GoogleDoc (e.g. mimic a writer's style or revise an essay with issues that you load for them)

Dispositions

- Students' attitudes and beliefs about a given domain or expectations
- Personal communications (interviews, journals, reflections)

Examples for online:

- Students maintain a reflection journal throughout class with prompts that focus on beliefs and attitudes
- Personal communications – open questions during instruction, oral exams, one-on-one feedback loops

Course Examples

GRADUATE EDUCATION CLASS

Design classes – want students to learn how to design effective instruction, how to apply particular methods and principles

Project-based design – on major product that is broken into a series of deliverables (students have to propose, provide a detailed plan, then storyboard, then develop)

Feedback provided at these stages on deliverables (formative) so students have an opportunity to act on the feedback

First class in sequence – have self-assessments periodically on both the content and best practices for being an online learner

UNDERGRADUATE ENGINEERING CLASS (MATERIALS ENGINEERING)

Professor recorded talks that presented material (direct instruction) and worked examples

After they viewed the video, students were then provided problems to solve and submit by recording themselves working out the problem and submitting as an assignment (measuring reasoning and skills)

Professor and students used tablet PCs with electronic inking that allowed them to draw diagrams and equations and record their work to share or submit

Course Examples

UNDERGRADUATE CLASS ON ETHICS OF TECHNOLOGY

Synchronous sessions with ~20 minutes of direct instruction to present content then ~30 minutes in small groups answering quiz questions that required reasoning and application of readings (instructor drops in on all the groups), then ~20 minute whole-class discussion to share and discuss

Cross-country collaboration (UVA and TU Dortmund in Germany)

Simulation on decision making – required research, presentation of research, recommendations, deliberation, final proposal, then an after-action review featuring a discussion with the head of Germany's Nuclear Ethics Commission

GRADUATE CLASS ON SPECIAL EDUCATION – ASSESSING LEARNERS WITH DISABILITIES

Scaffolded case study design

1. Case 1 – "textbook" – provided all the relevant materials
2. Case 2 – a bit more authentic – some missing information
3. Case 3 – authentic – missing documents, conflicting doctor's reports, "answers" aren't clear or simple

Designed cases like a scavenger hunt – students had to go to certain "offices" or email certain people to receive information (like they would in real life)

Some resources buried in emails – could tell who carefully read and who did not

Formative & Summative Assessment

EVALUATING STUDENTS AND CREATING FEEDBACK LOOPS

Formative & Summative

Summative

Do students receive some sort of feedback that allows them to adjust?

No → **Summative**

Yes → **Formative**

Measuring learning at the conclusion

Evaluative – final course grade, final exam, midterm exams (usually) or end-of-unit exam

Informs decisions on achievement, effectiveness of course / programs, course placement decisions, graduation, etc. (not used to inform students on their learning and how to improve)

Summative Only – High Stakes

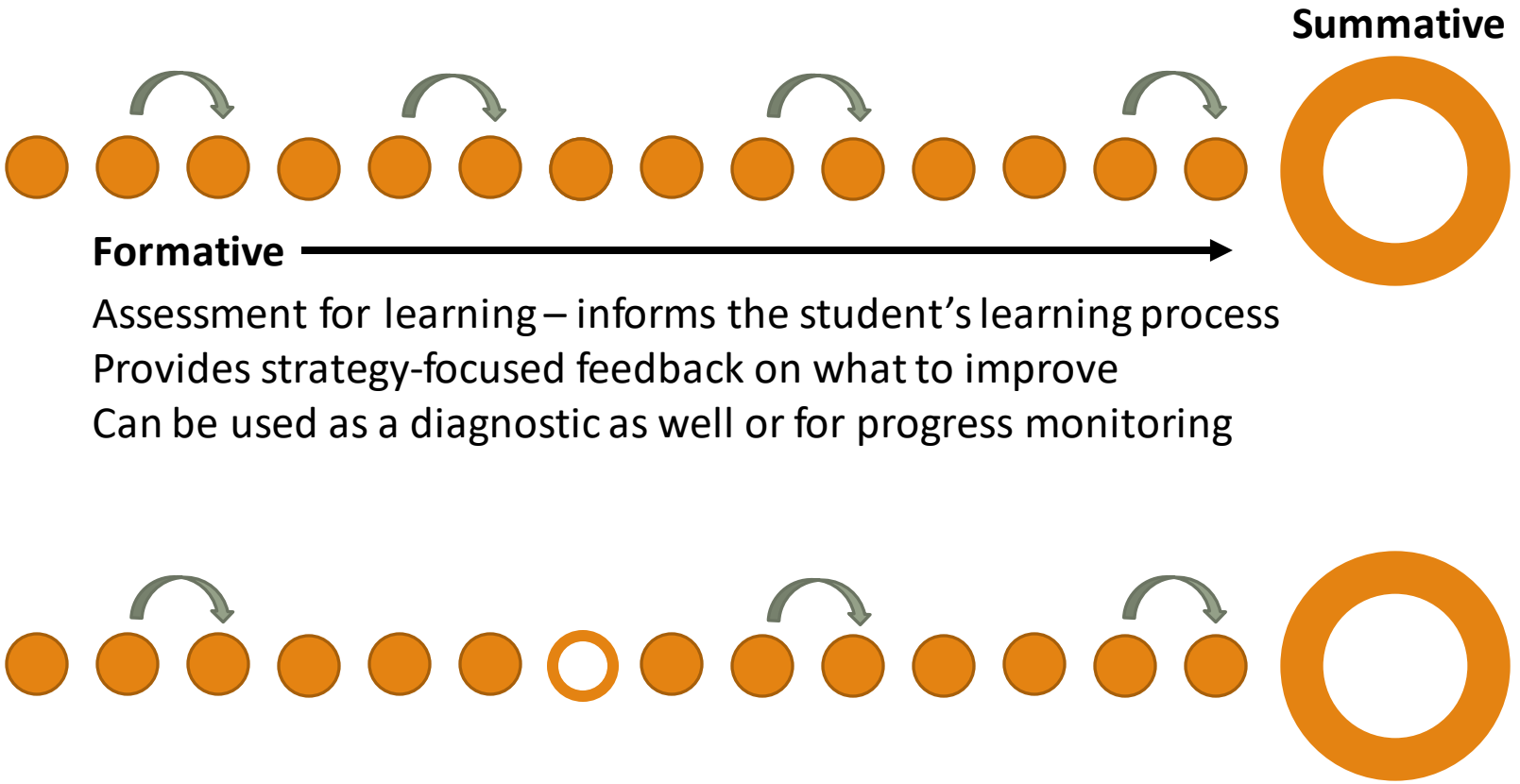
Summative

If you are only using Summative assessments, especially if it's only once or twice a course, this contributes to "high stakes" conditions that become favorable to cheating

Want to lower the stakes and increase the support for meaningful learning – Formative Assessment helps with that

S. Moore, Fulbright Panel - Sri Lanka, 11-18-2020

Formative Assessment



Assessment for learning – informs the student's learning process
Provides strategy-focused feedback on what to improve
Can be used as a diagnostic as well or for progress monitoring

Feedback

Type of Feedback	Changing Role for Instructor	Tools
Strategy-focused feedback (what is strong, what needs attention – and how to tend to it) Not error-focused feedback	Instructional time shifts from content delivery to discussions and feedback with students	Ability to comment on submissions and provide written or audio feedback on work Feedback via discussions Synchronous tools for live class meetings and office hours

Activity: Selecting Assessment Methods

Go through your course objectives and classify them using Bloom's taxonomy (if you haven't written course objectives yet, this is a good time to do so – you can use Bloom's to help you structure those).

THEN for each objective, map it to the appropriate type of assessment so you are aligning these (start brainstorming if you feel so inclined – we'll talk about specific ideas in Days 2 and 3).

You can use the table on the next page to list objectives under each classification on Bloom's and then indicate type of assessment / enter notes.

Activity: Selecting Assessment Methods

You can use the following table to list objectives under each classification on Bloom's and then indicate type of assessment / enter notes. Feel free to copy this into a separate document – whatever is helpful.

Bloom's Taxonomy	Knowledge	Reasoning	Skills	Products	Dispositions
Remember					
Understand					
Apply					
Analyze					
Evaluate					
Create					