Adapting Active Learning Strategies to Online Courses

As you move your course to an online format, you may want to consider how you can actively engage your students online. The chart below, organized by complexity, lists some common instructional strategies used in face-to-face contexts and how you might adapt them for online courses delivered synchronously (i.e., meeting at the same time online) or asynchronously (i.e., not meeting online at the same time). These activities vary in the amount of work required to integrate into your teaching and learning context.

The tools listed below (e.g., Zoom, Blue Jeans, Google Apps, Canvas, Kaltura, Piazza, Perusall) are U-M approved tools that all faculty, staff, and students have access to and are supported by U-M ITS. For support or additional information about the strategies you may be interested in, please see our CRLT Active Learning website or schedule a consultation with one of our consultants who are available to help you implement active learning in your individual teaching practice.

Strategy	Face-to-Face Implementation	Synchronous Online Implementation	Asynchronous Online Implementation
Clarification Pause	● After stating an important point or defining a key concept, stop, let it sink in, and then (after waiting a bit!) ask if anyone needs to have it clarified. ● You can also circulate around the room during these pauses to look at student notes, answer questions, etc.	● Zoom/Blue Jeans: Pause intentionally throughout the live session and allow students to use the "Chat" or "Raise Hand" features to ask questions.	● Canvas: Use "Threaded Discussions" or "Course Chat" features to create distinct conversations based on students' questions. ● Alternatively, you can ask students to direct questions to a GSI/IA using the "Chat" feature.
Brainstorming	● Introduce a topic or problem and then ask for student input. Give students a minute to write down their ideas, and then record them on the board. ● Brainstorming activities include focused listing, free writing, outlining, mapping/webs, and carousel (pass it around).	● Zoom/Blue Jeans: Use "Breakout Rooms" to have smaller groups of students come up with a list. Use the Whiteboard to write down ideas as students share. ● Google Apps: Use the Chat feature to share a link to a Google doc/sheet/slide with instructions, and then use screen share to project the student work.	● Canvas: Create a wiki page or Threaded Discussion and invite students to contribute. ● Piazza ● Google JamBoard is a digital whiteboard that can be shared and edited like other G Suite products.

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Minute Paper/Muddiest Point	• After presenting a "chunk" of content, ask the students to take out a blank sheet of paper or index card and respond briefly (in 1-2 minutes) to prompts such as "What is the most important point you learned today?" or "What point remains least clear to you?". • *Tip: In a large course, consider having students submit their minute papers as a Canvas assignment, Canvas quiz, or Google form.*	• Zoom/Blue Jeans: Use the Chat feature to get students' questions and responses throughout the class session either in breakout rooms or as a whole class • Google Apps: Use the Chat feature to share a link to a Google Doc or Form • Canvas: Set up as an assignment, quiz, or survey and ask students to respond throughout the class session • *Tip: Ask students to come up with a "Top 5 takeaways…" or similar list*	• Canvas: Set up as an assignment, quiz, or survey and ask students to respond (written, audio, video) • Piazza: Encourage students to submit questions regarding topics they are still unsure about • *Tip: You can set up prerequisites and requirements in Canvas modules to have students progress through items in a sequential order.*
Think-Pair-Share	• Have students first work on a given problem/prompt individually, then compare their answers with a partner and synthesize a joint solution to share with the larger group. • In a large class, consider using a Catchbox or having each pair submit a response using some type of polling software (e.g. i>Clicker Cloud) or a Google form and then highlight themes that emerge in the responses. • *Tip: Consider imposing a time limit for each stage and notifying students*	• Zoom/Blue Jeans: Post discussion prompts or activity instructions in main chat and then use breakout rooms for students to chat and then report back. • Google Doc: Create a Google doc to respond to a prompt first and then comment on or discuss the response of their peers • *Tip: Students can collaborate in real time in Zoom using screen sharing and/or embedded whiteboard*	• Canvas: Use discussion board and assign students (purposely or randomly) to pairs or small groups. • Google Doc: Create a google doc where students can work together on a learning activity in real time • *Tip: Consider asking students to produce a collaborative summary statement*
Discussions (large group or small group)	• Students discuss a topic in class based on a reading, video, or problem. The instructor may assign students into groups. The instructor may prepare a list of questions to facilitate the discussion.	• Zoom/Blue Jeans: Assign students in breakout rooms and use Google doc or Perusall for group notes or discussion prompts	• Canvas: Use groups in Canvas to manually or randomly assign students to pairs or small groups for the discussion prompts. • For larger group discussions, assign one or two students to summarize a discussion thread and present it to the class. • Google Doc: Students can work together in a Google doc to engage the group in consensus

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Self Assessment	• Start or end a class with a short quiz (graded or ungraded) on the assigned readings.	• Zoom/Blue Jeans: Publish a Canvas Quiz or Google Form at the beginning or end of a synchronous session • Use polling feature in zoom or another online poll to ask questions and show responses in real-time.	• Canvas: Use Quizzes or Surveys to create ungraded or low stakes quizzes after completing a particular reading, activity, or unit. • Google Forms: Create a quiz or survey and share the link via email or Canvas
Reflections or Journals	• Students describe and analyze their thoughts, feelings, experiences, or knowledge (with or without guided prompts). • Students can complete as in-class assignments or online using Google Docs, Discussion boards, or assignments in Canvas (written, audio, or videos responses) • *Tip: This is useful for tracking progress, especially for long-term projects, observations, experiential learning, and clinical experience.*	• Zoom/Blue Jeans: Use Breakout Rooms to divide the class into small groups (2-4 students), and invite group members to discuss their reactions for a specific amount of time, then bring the groups back together. • Canvas: After synchronous class session, use Discussion boards, or Assignments in Canvas (written, audio, or videos responses). •	• Canvas: Use Discussion Boards, or Assignments in Canvas (written, audio, or videos responses). • Google Docs: Create an online journal with entry guidelines and/or prompts. • *Tip: Consider "breaking up" longer lessons by inviting students to write a brief (5-10 minute) response using a timed Canvas assignment and then present the second part of the lesson.*
Advance Organizers (e.g. K-W-L chart, concept map, Venn diagram, main Idea chart)	• Provide students with organizational structure and instructions prior to formal instruction. Students fill in the structure while learning the information. • May be done individually, as a group, or both.	• Zoom/Blue Jeans: Whole class activity - while sharing your screen, have a Google doc open that you can populate with student responses submitted through Chat. You can also use the white board in zoom's screen sharing tool. • Google Doc: during the live session, have students go to a Google Doc where they can populate the information together.	• Canvas: Using assignments or discussion, have students to complete the advance organizer after completing a reading, or content module. Alternatively, create a page as a wiki and allow anyone to edit it. • Google Doc, Slides, or Jamboard: during the live session, have students access it and they can populate the information together. • Mindmup is an add-on tool to Google Droves that can be used for concept mapping
Peer Review	• On the day the assignment is due, students submit one copy to the instructor and one copy to a peer. Each student then takes their peer's	• Zoom/Blue Jeans: Share the assignment link (e.g., google doc) with a peer, review the assignment, and give feedback	• Canvas: Use the Peer review function in Assignments to manually or randomly assign peer reviews. Or, use Discussion Threads with

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	work and, depending on the nature of the assignment, gives constructive feedback, corrects mistakes, etc. • *Tip: Consider embedding a rubric or peer evaluation form into the Peer Review Assignment to improve student-student feedback.*		deadline to post an initial response and then respond to their peers. • Google Docs: Students submit their assignments into a shared class folder. Students can use the editing and comments features to provide feedback on each other's writing and engage in the peer review process.
Concept Questions (e.g. interactive lectures, polling)	• Utilizing clickers, hands, or other technology, have students answer questions regarding lesson concepts.	• Ask polling questions to students in Zoom, Google Forms or Canvas Quizzes, in order to check students' understanding of key concepts.	• Canvas: Set up short, no or low stakes quiz for students to take before, during, or after content delivery. • Record your lecture into short (10-15 minute) "chunks". After uploading your video recording to My Media, use Kaltura editor to embed questions into your videos.
Cooperative Learning Groups (Informal Groups, Triads, etc)	• Pose a question(s), activity, or task for each cooperative group while you circulate around the room answering questions, asking further questions, and keeping the groups on task. Ask students to share their discussion points with the rest of the class. • *Tip: Make sure you give students a time limit to keep the conversation focused on the question(s).*	• Zoom/Blue Jeans: Use Breakout rooms for students to chat and then report back their answers to the question(s). for greater accountability, have someone report the answers using a Google Doc or Canvas assignment.	• Canvas: Use groups in Canvas to manually or randomly assign students to pairs or small groups for the discussion prompts. • Google Doc: Students can work together in a Google doc to engage the group in consensus.
Student Generated Questions	• Ask students to write test questions (multiple choice or essay) and model answers for specified topics, in a format consistent with course exams.	• Zoom/Blue Jeans: Ask students to submit questions using Chat feature or via a Google doc. • *Tip: You could assign students to breakout rooms and ask each group to come back with 2-3 possible questions*	• Canvas: Ask students to submit questions via a quiz, survey, wiki page or in a Discussion forum or using Piazza. • *Tip: Consider creating Groups in Canvas to collaborate using Google Docs*

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Think-Aloud Pair Problem Solving	• Ask students to solve problems aloud to try out their reasoning on a listening peer. • *Tip: Have students use paper or individual whiteboards divided in columns. In the first column, students write the problem solving steps and then explain their reasoning or rationale in the second column*	• Zoom/Blue Jeans: Use the Whiteboard and annotate features in the Breakout rooms. Students can point to a webcam or smartphone at their work and share with their peers and/or instructor. • Image files can be uploaded to a Google file for Canvas discussion to be peer reviewed either synchronously or asynchronously • Google Jamboard	• Canvas: students can upload their work and add an audio file explaining their method • Google Jamboard
Collaborative Annotations	• Instead of musing a discussion forum, have students document their thoughts and questions by annotating directly in the article or textbook chapter that they are assigned using software such as Perusall or Hypothes.is.	• Zoom/Blue Jeans: Use the chat box to share a link to a Google Doc and provide instructions to students about how to add annotations using comments. Use the Screen Share to project student work when complete. • Canvas: Use Perusall to have students annotate pdf documents and textbooks • *Tip: Create smaller groups for Perusall to make it easier for students to discuss and annotate*	• Canvas: Use Perusall to have students annotate pdf documents and textbooks • Using Google Apps, share a link to a Google Doc/sheet on your course website. Set clear expectations about how students should use the comment features to add annotations.
Fishbowl Activity	• Select a small group (3-8 students) to discuss or debate a question, problem etc. The rest of the class sits around the small group silently observing and evaluating the discussion. Make sure you take time at the end for members in the "bowl" to comment on what they observed.	• Zoom/Blue Jeans: Ask students who initially observe to mute their microphones and ask students who will be inside the virtual fishbowl to leave their microphones and video on. When large group discussion occurs, everyone turns on their video. • Tip: Have student observers use a Google doc live typing	• Canvas: Assign students to two teams and create a discussion forum. The students "in the bowl" lead the online discussion forum. The students "out of the bowl" read the initial posts and evaluate the discussion. Alternatively, students in the bowl can record themselves and the others can respond in a discussion forum.
Jigsaw Activity	• Divide the class into small groups, each of which is assigned a different	• Zoom/Blue Jeans: Pose the puzzle/problem to the entire class	• Canvas: Use groups to manually or randomly assign students to small

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	topic or task (expert groups). Then, new groups are formed, each composed of one member from each of the original expert groups (so all group members in the new group have completed a different task). Students take turns presenting their work to the rest of the group.	and then break students into rooms for small group discussion (expert group). Then reconvene and have the "expert groups" present their work to the entire class. ● Alternatively, reconvene into the large class and create a second set of breakout rooms comprised of one member from each of the original expert groups.	discussion (expert) discussion groups. After a specified time (e.g. 2-3 days), manually create a second set of groups composed of one member from each of the original expert groups. ● Alternatively, post the assignment overview as the discussion prompt/description and create a thread for each topic/task. Then ask students to read and respond to the "expert" threads for which they were not a part of.
Inquiry-based Learning	● Students use an investigative process to discover scientific or engineering concepts for themselves. A question is posed that asks students to make observations, pose hypotheses, and speculate on conclusions. Then students are enlisted to tie the activity back to the main idea/concept.	● Zoom/Blue Jeans: micro lecture, pose questions, think/make observations individually or in small groups, pose hypotheses or conclusions via Chat or Google Doc	● Canvas: Students can use ePortfolios, blogs, and online quizzes to provide themselves with self-reflection and feedback on their course assignments. ● Students can receive further feedback on their course work from their peers and instructor through Peer Review in Canvas or in a Google Doc.
Case Studies	● Students are given a detailed description of an authentic scenario (i.e., community, family, healthcare, industry, school) and are asked to draw inferences, make decisions, and/or identify possible solutions based on the content they are learning. Can be an individual or group activity.	● Canvas: Use groups in Canvas to manually or randomly assign students to small groups for duration of the case study. ● Use breakout rooms in Zoom/Blue Jeans for students to discuss ● Students can work together in a Google doc/slide/sheet to complete the assignment	● Canvas: Use groups in Canvas to manually or randomly assign students to small groups for duration of the case study. ● Students can use the group space in Canvas to share resources, documents and files. ● Google Doc: Students can work together in a Google doc to submit the case resolution.
Team-based Learning	● Traditional TBL moves initial acquisition of basic knowledge outside of the classroom (typically with targeted readings), then checks	● Use Canvas to assign and manage pre-work ● Use breakout rooms in Zoom/Blue Jeans for students to discuss.	● Canvas: Use groups in Canvas to manually or randomly assign students to small groups for duration of the activity and assign pre-work.

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	and builds on that initial knowledge using a process known as the Readiness Assurance Process. Finally, having established a shared level of basic understanding, teams move to an application phase where to are asked to make decisions in applying what they abstractly learned to solve concrete problems and apply course content.	• Readiness assurance can be done using timed quizzes in Canvas. • Team reporting can be facilitated by using a shared whiteboard, polling tools, or Google docs/sheets/slides/forms.	• Readiness assurance can be done using quizzes (individual) and a digital GRAT for groups. • Google Doc: Students can work together in a Google doc to engage the group in consensus
Role Play	• Assign student to "act out" a part, position, or argument in a simulation, debate etc.	• Zoom/Blue Jeans: Assign a moderator. Create a virtual panel discussion between the "actors" or presenters. Viewers/observers can suggest questions via Chat or "raise hand". After a specified time, ask the viewers/observers to debrief the performance.	• Canvas: Create a discussion or assignment and ask students to respond to the prompt "in character". Alternatively, assign students to complete a group assignment while playing the role. • Have each presenter record a short presentation "in character" and upload it to a Canvas assignment. Assign the entire class as "peer reviewers" for the assignment. Alternatively, ask the entire class to comment via a threaded discussion (one for each presenter).

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