Learning Environment Advisory Group

Draft Agenda
September 24, 2024
2:30 pm – 4 pm, Microsoft Teams

Attendees: Lauren Couture, Soowook Kim, Michelle Johnson, Bryan Wilkinson, Brian Wright, Heather McAlpine, Masud Khawaja, Awneet Sivia, Megan Kjestrup, Kristi Wood, Anu Sharma, Grant Fritzke, Ingi El-Hadi

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1.0 Welcome and Introductions

2.0 Classroom Arrangements Pilot Project – Fall 2024 (Awneet)

3.0 LMS Project (Awneet/Soowook)

4.0 ITS Update (Bryan Wilkinson)

5.0 Faculty Space/Equipment Needs

6.0 Learning Environments Guidelines: Educational Technology (Awneet Sivia)

7.0 Roundtable (Everyone)

   Teaching and Learning Open House Oct 2, 2024

   https://events.ufv.ca/tlc/events/tlcs-meet-greet-scavenger-hunt/

8.0 Next Meeting: Nov 26, 2024

Strategies to Support Active and Collaborative Learning[1]

Strategy	Purpose	Description of Strategy	Examples	Implementation Suggestions and Variations[1]
1. **Background Knowledge Probes (*)** see *Test-taking teams*	• Instructor determines effective starting points / appropriate levels of instruction for a given subject or class. • Students focus their attention on important material Text	A background knowledge probe (BKP) asks for basic, simple responses (short answers, circling / showing of hands, multiple choice questions) from students who are about to begin a session or study a new concept.	1. During an introductory music theory course, ask how a minor third is formed. 2. In a philosophy course, ask students to summarize the historical context for Plato's *The Republic*.	1. For carrying out BKPs in large classes, clickers (Student Response Systems) can be a very quick and thorough method of tabulating student responses to multiple choice questions. 2. Students may brainstorm together and work to arrive at a common answer prior to reporting out on their response. 3. ★ For a variation on the BKP, a different question could be given to each table or smaller group to arrive at consensus regarding the correct answer. Following this decision, use the jigsaw strategy (either as a whole class or in sub-groups) to communicate the question, the group's solution, and rationale. 4. This strategy can be augmented by following up with other strategies as well (e.g. think-pair-share, or returning to this at the end of the session with the "muddiest point" concept).

2.
 Brainstorming
	• Students generate a large number of <u>ideas</u> for potential solutions to a <u>problem</u>
	 • Students develop team learning skills
		1. State the issue and generate ideas regarding the issue, having agreed upon a time limit.
		 2. Categorize, combine, condense and refine ideas
		 3. Assess potential solutions
			1. In a management course, ask students to suggest potential courses of action for the president of a company facing a potential labor strike. Given specific constraints established by the instructor or students (e.g. the issues in question, company size, duration of previous negotiations) prioritize options in terms of feasibility and appeal.	1. Ask students to not only brainstorm ideas, but also verbalize the relationships between the ideas.
				 2. May be complemented by a mind-mapping activity.
				 3. Brainstorming can encompass other strategies. Some examples presented elsewhere in this document include:
				     Focused listing
				     Mind mapping
				     Roundtable
				     Think-pair-share
				     Closing summary
				     Corner exercise
				     Buzz group
				     ★ "Write around the room"

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3. **Buzz Groups**	• Students develop teamwork and cooperative learning skills	1. The instructor divides the class into subgroups to discuss an assigned topic or to solve a problem. 2. Participants can briefly present their findings to the whole group so that the instructor can respond to comments and stimulate discussion.	1. In a communications course for engineers, students are presented with a technical manual and asked to re-write different sections in small teams to make them more accessible to a non-expert audience.	1. Enforce a time frame to avoid side conversations and keep students focused. 2. When students report out, challenge groups to contribute only ideas that haven't yet been mentioned. 3. ★ Buzz groups can present findings to the class as a whole using the screen-sharing capabilities or on the main projectors. Alternately, small buzz groups or pairs can present their findings to their table only, giving more time for each presentation.
4. **Cases**	• Students apply theory to practice by discussing realistic, relevant scenarios. • Students encounter real-world, authentic contexts that expose them to viewpoints from multiple sources and help them to see why people may want different outcomes.	Provide scenarios students may encounter when they would need to use the information learned during the course. It is helpful to provide time for questions after the case scenario is introduced.	1. In a medical course, students are asked to match findings to interventions applied, and their implications for the patient. 2. In a banking course: The instructor presents students with numerous applications for loans for start-up businesses. Students must evaluate which loan applications will be approved and which will be declined, and justify their responses.	This strategy can be combined with a think-pair-share: students first generate a couple of approaches to the case individually and then pair up. In pairs, students share their proposed scenarios, and then chose one to pursue further and elaborate upon. ★Students can use wall space to brainstorm and organize their thoughts. ★Mobile chairs allow group members to collaborate on different aspects of the cases. ★Access to online resources facilitates timely research and case preparation. ★The dual sources may be used to project both the case being considered and the students' response to that case scenario.
5. **Closing Summary** (list key concepts or ideas)	• Instructor ascertains whether students were able to identify / grasp the key topics. • Students reflect on their learning.	Have students write a closing or "exit summary" individually or in pairs, listing or summarizing the main ideas about the topic presented during the session. Students can compare and contrast their summaries in pairs to build upon one another's understanding of the material.	1. What were the three key points or "take-aways" of today's class? 2. What did you find most interesting? What did you find least interesting? What did you want to learn more about? 3. If you were to make two exam questions that consider the main points from today's material, what would they be? How would you answer those two questions?	1. Make certain to set aside a couple of minutes at the end of class for this strategy. Teachers may selectively collect the lists and summarize the main points, addressing misconceptions at the beginning of the next class. 2. Ask students to summarize the previous class session at the beginning of the next one, to ensure continuity between class periods. ★Students can create their closing summaries on the computers, and then share them with others at their table using the screen-sharing capabilities.

Strategies to Support Active and Collaborative Learning[1]

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6. **Corner Exercise / "write around the room"**	• Students build upon one another's knowledge • Instructor becomes aware of which concepts are clearly understood, and which concepts were *not* incorporated into students' knowledge base.	1. Form groups 2. Each group moves to a corner and brainstorms a list in response to a question posed to the entire class 3. Move to the next corner—expand on the previous group's examples 4. Review the contents of each list as a large group	1. In an English literature course: What are recurring features of Lord Byron's poetry? How do these stylistic elements hint at his intended audience? What are the key traits of the Byronic hero?	1. Students can put a check mark next to previously listed responses that are consistent with their lists. 2. Set and keep a time limit for this activity, to ensure that students have sufficient time at each of the corners. 3. Once students have completed this activity, they might organize the results using concept mapping, to further crystallize their understanding of the concepts' relation to one another. 4. ★ Don't limit yourself to the corners! Take advantage of the writeable walls around the classroom for students to record their thoughts and build on classmates' ideas.
7. **Critical Debate**	• Students work to articulate their thoughts and solidify their understanding of numerous aspects of the task / situation at hand by debating for one side or the other.	1. Students use two different methods that could be applied to solve a problem or arrive at a solution in response to the concepts introduced. 2. Alternately, the class can be divided to debate the merits of one method or solution over the other. The presenter leads a group discussion afterwards, asking students to argue for the point of view indicated, or compare experiences.	1. In a labor relations class, students debate proposed cuts to an employee benefits package. Half of the students represent the business, which has been charged with reducing its budget; the other half represent the employee union, which objects to some of the proposed modifications.	1. After arguing for one side or the other, students argue for the alternate point of view, attempting to elicit new rationales. 2. May be combined with the "Fishbowl" strategy. 3. By combining this with the "Fishbowl" strategy, student onlookers can provide feedback on the debate, and discuss which arguments were most compelling and convincing. 4. ★ Use the dual source projector capacity to project both sides' rationales at once for comparative and reference purposes.
8. **Dialogue Journal / clinical log book**	• Students develop their communication skills and reflect upon the application of prior knowledge or personal experience to course material or clinical situations. • Students increase their collaboration and a sense of classroom community as students respond to one another's journals • Students clarify and extend their explanations and rationales in response to classmates' written comments.	1. Students draw a line down their journal page 1/3 of the way in from the right margin. The responder will write to the right of the line. 2. The writer reflects upon an assignment, clinical experience, lecture, class task / activity or discussion, including his or her comments and questions. 3. The respondent reads the journal entry and provides comments, clarifying questions, answers to the writer's questions, etc. 4. The instructor reads the journal entries and responses.	1. In a Shakespeare course, have students compare and contrast the written play and movie versions. Ask them to identify elements of the play that were either emphasized or left out in the screenplay, and the impact they think this had upon the representation and the audience's response. 2. In a course on clinical practice, students reflect upon their stage or other experiences with patient care – decisions made are explained with a rationale, and outstanding questions are posed for feedback.	1. Clarify parameters and expectations for journal entries. 2. As students may take variable amounts of time for journaling, the writing and response can take place outside of class time as an opportunity for follow-up and reflection upon in-class experiences. 3. Have students submit their journals regularly. 4. Keep a community dialogue journal for all students to record questions or ask for clarification; students respond to one another's questions within the journal. Questions may also be addressed in-class. 5. Have students write their journal entries in letter format.

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9. **Fishbowl** (outside-inside circles, Socratic seminar)	• Students participate in structured, in-depth discussion • Students model, observe and critique group processes through the discussion format	1. Students form a small circle (group of 4-6 students). Remaining students form a larger circle around the 4-6 students. 2. Present guidelines for the activity: students in the inner circle speak, while those in the outside circle observe (considering both the discussion and group process). Students in the outside circle will have an opportunity to speak to the issues that arose during the discussion in the follow-up time. 3. Present the discussion prompt. Inner circle students debate. 4. Students report out in a whole-class discussion, encompassing key issues and the group process.	1. In a biology class, students respond to the question "Why are we worried about changes in the ozone layer?"[2] 2. In a class on higher education administration, students debate whether higher education is (or is not) an industry.[3]	1. Do not try this the first day of class: first develop a level of trust, a non-judgmental environment and sense of collaboration. 2. Have students facilitate the discussion; step in only if necessary. 3. Conduct multiple, smaller fishbowls concurrently. 4. Allow students to trade out between the outer and inner circles every few minutes, to expose different points of view and to see different group dynamics. 5. ★Mobile chairs allow for easy placement of students in and outside of the circle, as well as for changing the participants in the inner group. 6. ★One or two students can be assigned to writing on the walls the main points discussed.
10. **Focused Listing**	• Instructor identifies students' prior knowledge or attitudes • Students recall what they have learned about a topic	Students recall what they know about a subject by creating a list of terms or ideas related to it. 1. To begin, the instructor asks students to take out a sheet of paper and generate a list based on a given or chosen topic. 2. Instructors ask students to share their lists. *Note: Can be used before or after instruction. Focused listing need not take more than a few minutes.*	1. In an educational psychology course, students provide examples of defining characteristics of Piaget's stages of cognitive development. 2. In a political science course, students identify the pros and cons of a government's proposed course of action currently in the news.	1. Impose a time limit and inform students. 2. Students share their lists in small groups. 3. Students make a focused list prior to the discussion and then add to the list (correcting any prior misconceptions) at the end of the class period. 4. May be used in conjunction with the "Roundtable" strategy. 5. Students share their lists in small groups and identify the two to three most important points, which they then share with the class. 6. ★ Students brainstorm in small groups, typing their lists. Can also be combined with "write around the room" strategy. 7. ★ Students can project their list using the screen sharing facilities.

[2] Barkley, E.F., Cross, K.P., and Major, C.H. (2005), p. 146
[3] Barkley, E.F., Cross, K.P., and Major, C.H. (2005), p. 147

Strategies to Support Active and Collaborative Learning[1]

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11. **Jigsaw**	• Students develop teamwork and cooperative learning skills • Students integrate knowledge and understanding from various sources and experts. • Students engage in their own learning • Students learn a lot of material in a limited amount of time • Students are individually accountable for their learning	Groups are formed to discuss different portions of a larger scenario or problem; group members then report out. 1. Divide a topic into related portions. 2. Divide students into "expert groups"; each group will study and address a portion of the topic. 3. After researching / investigating their specific focus, the expert groups are split up so that the resulting groups have one member from each of the expert groups. 4. Upon gathering the new groups together, each topic expert presents, integrating the knowledge of his or her specific topic into the new group's collective understanding.	1. In a plant science course, students review the characteristics of various types of trees (conifer, deciduous, etc.) and corresponding climate zones in expert groups and then report out to their new groups.	1. Encourage students to take notes of key points generated during step 3, which will help them to prepare for step 4. 2. Review previously discussed concepts. 3. A chosen group from step 3 reports out to the entire class; facilitate a brief discussion in response to their key points. 4. ★ Table layout and rolling chairs allow for quick grouping and re-grouping. 5. ★ The "expert groups" can collaborate using the writable wall surfaces or the computers for brainstorming, researching, or concept-mapping regarding their topic.
12. **Mind mapping**	• Students demonstrate their understanding of a topic (prior to / following instruction)	Ask students to identify key concepts about a topic to create a visual representation of the relationship between those ideas. Students can use basic elements such as boxes, arrows (uni- or multi-directional), simple hierarchical relationships or "webs" coming from one central point, to identify concepts and relationships.	1. In a course on international relations, students create a visual representation of the purposes, scope, impact and reach of the United Nations. 2. In a pharmacology course, students create a critical distinctions chart to compare and demonstrate the differences between similar drugs. 3. In a biology class, students draw the phases of mitosis, including a diagram of the cell at each phase.	1. Provide examples of various formats of mind maps to give students options for various graphical frameworks they might use to express the relationships between concepts. 2. Students compare and contrast their mind maps in pairs, working towards a single map that incorporates all agreed-upon elements. 3. ★ Writable wall spaces allow for larger mind maps, or provide a good space for brainstorming lists of topics prior to establishing their relationship to one another. 4. ★ Table layout allows the assignment of a team map. 5. ★ Use software to develop maps in small groups on the computers; have students at each table share their maps with the other students at the same table using the screen-sharing capabilities.

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13. **Muddiest Point**	• Students reflect upon which aspects of the course material are the least clear to them.	Ask students to write down what seemed most confusing to them. Feedback from students can be used to create new ways to discuss those points that multiple students found to be unclear.	1. What was the "muddiest point" of the material discussed today? 2. Write one thing that wasn't clear to you from today's course material. Why do you think this was confusing?	1. Encourage students to be very specific in identifying the source of confusion. 2. The instructor can begin the next class by reviewing selected "muddiest points". 3. Students attempt to answer one another's "muddiest point" questions. 4. Students indicate what information they would need to better grasp the course material discussed. 5. ★Use the writable wall spaces for students to write down questions that they still have. Then, in an adaptation of the 4-corner exercise, have students circulate and provide responses clarifying one another's questions.
14. **One Minute Paper/Free Write**	• Students briefly explore ideas before discussion • Students bring closure to a session by recording the ideas in their minds at that moment.	Participants are asked to write for 1-5 minutes on a topic or in response to a question that you've developed for the class period.	1. In a survey course on art history, students describe the characteristics of Impressionism. 2. In a Canadian studies course: "What are some of the ways in which climate change is affecting the Arctic and its inhabitants?"	1. You might emphasize content over form, so that students focus on expressing their ideas given the time limitation. 2. This can be used as an "exit survey"—a means for students to summarize what they understood to be the key points of the class period. 3. Students can approach a new topic by writing down what they know and want to know at the beginning of the class, and then follow this with a reflection of what they learned at the end of the class time. 4. ★ Individual/groups can share their answers with the larger group using the screen sharing facilities offered by these computers. 5. ★ Take advantage of the dual source projection. On one screen project one or more samples of one-minute papers (e.g. using the document camera). On the other screen, project information or resources to clarify or elaborate on what was written on the paper, for example.

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15. **Pre-and Post-Quizzes**	• Students assess their comprehension and evaluate their learning over the course of the class period. • Instructor gathers information about students' prior knowledge and assesses learning over the class period.	1. Create a 1-page quiz that covers the primary focuses of your session 2. Have students take the quiz at the beginning of the session, and then set it aside. 3. When the students take the same quiz at the end of the lesson, they will see what they have learned instantly. 4. Having the students pass in their quizzes provides timely feedback to the instructor on their learning over the course of the session.	1. In an introductory biology course, students are asked to put the steps for meiosis in order and label the structures both prior to and following the lecture.	1. Ensure that sufficient time is allotted to convey the correct answers at the end of the session, and to answer any questions that arise as a result. 2. Student responses to the pre-quiz can be incorporated into review sessions later in the class. 3. Students might follow the post-quiz with a one-minute paper summarizing what they learned. 4. ★When evaluating the quizzes, check to see whether students sitting in the same tables have demonstrated similar or divergent levels of comprehension. If a certain group is doing quite well, while another one is struggling, try to find out why: Are students getting along well? Are they on-task? Is there confusion over use of the technology? Are you consistently teaching with your back to this group?
16. **Presentations**	• Students and instructor are able to gauge the following: preparation; understanding; knowledge; capacity to structure information; and oral communication skills. • Students and instructor can provide feedback. • Students respond to questions and manage discussion.	Students express their knowledge on an assigned topic to classmates and instructor. May range from informal to formal. Presentation length, size of presenting group, structure of presentation, criteria and technology used within the presentation may all vary.	Presentations can be given on virtually any topic.	1. Provide students with a rubric and discuss expectations for presentations. 2. Discuss providing constructive feedback to peers. 3. Encourage student feedback and involvement in the establishment of rubric criteria for evaluating presentations. 4. To help students become familiar with presentations, they might begin by presenting to small groups of their peers, rather than to the entire class at once. The listening members of the small group can then summarize and report out to the larger class on the 3-5 key ideas of the presentation. 5. ★Presentations can be significantly augmented within this space with the use of resources: • Microphones on the tables; • Dual-source projection option (e.g., keep a PowerPoint presentation up and concurrently display a short video clip); • Screen-sharing in real time: allows classmates to try out sample exercises, check out the same website, etc.; • Group configuration: students can give smaller presentations to their table, instead of to the entire class.

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17. Problems	• Students develop communication, problem-solving, and self-directed learning skills.	Students individually or collaboratively solve problems, apply what they have learned in the course and reflect on their experiences. Teachers take on the role as "facilitators" of learning.	1. In a plant science course: Numerous farmers in the Eastern Townships report that their tomato plants are stunted and withered. What would you propose as the cause of this unhealthy appearance? What would you suggest that the farmers do to approach this problem? Using the resources, find background context, discuss in your team, and justify your response.	1. For collaborative problem solving, groups should be chosen carefully, to facilitate students' interactions and promote a productive group dynamic. 2. Have students create their own problem-based learning prompts, vet them then re-distribute amongst their classmates. 3. Students reflect upon how different conditions might affect their response, or approach the same problem from a different point of view. (For instance, in the example given at the right, they might propose solutions from the perspective of an organic farmer, a pesticides company, and a community-supported agriculture organization.) 4. ★ Students can use the table computers to create their prompts and submit to a common resource's page (e.g. WebCT) where other students can download and work on. 5. ★ Different tables can work on different aspects of the problem. If they work on the same problem, you can use the dual-source projection to show different approaches.

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18. **Questions**	• Students are actively involved in class as they apply concepts and content learned. • Instructor determines student comprehension of content	1. The instructor provides engaging, challenging questions or asks for guidance during class time. 2. Students then provide answers either working individually, with a partner, or in a small group. 3. Questions should relate to learning outcomes and be thoughtful and reflective (Simple, yes/no, factual questions are not enough).	1. In a course on small business management and practice, the instructor asks students how they would attract new clients, given a limited budget or other constraints. Ask students to make reference to concepts discussed in class or in the readings in their responses. *See questions asked in examples throughout this column.*	Students need sufficient time to respond. This gives students sufficient time to organize their thoughts and brainstorm to make their ideas more articulate. Think about instruction in terms of the questions you hope are being answered – "If this session is the answer, what is the question?" and phrase your question prompts accordingly. For more complex queries, instructors might consider providing questions in written form so students can continue to refer back to them. Instructors might ask the same core question(s) on the first and last day of the course or unit as a method of formative and summative assessment. Students formulate their own questions based upon what they see as the key points of the topic at hand. These questions are then opened up to the class for discussion, or discussed in small groups. ★ Ask the class a question, and allow students a moment to discuss it in their table groups prior to calling for responses. Students can take advantage of the microphones on their tables to ensure that they are heard by the larger group.
19. **Ten-Two Strategy /** **Interactive Lecture**	• Students process information presented. • Instructor and students fill in any gaps or misunderstandings. • Students clarify information for one another; build on peers' knowledge	Presenter shares information for ten minutes and then stops for two minutes to encourage listeners to pair up with a partner and share their ideas.	1. In an U.S. History of the 20th Century course, the instructor asks students to summarize the economic impact of the Great Depression on the North American labour market in the 1930s and 1940s.	1. Encourage students to pair up with different classmates each time this activity is carried out. 2. At the end of the information-sharing time, pairs can pair up (making groups of 4 students) to summarize the 3-5 key points or "take-aways" from the session. 3. This activity may be used when students are watching classmates' presentations. This can be effective in maintaining audience focus and provides helpful feedback to the presenter in determining whether he or she successfully communicated the points intended.

Strategies to Support Active and Collaborative Learning[1]

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20. **Roundtable**	• Students summarize key concepts • Students participate equally • Students build on their peers' knowledge and respond to one another's conceptions	1. The instructor creates a prompt, which is written down in a highly visible location. Students are informed of the time limit that has been set for this activity. 2. In groups of four, students pass around a sheet of paper clockwise responding to the prompt in short phrases or sentences. After each student writes his or her response, it is read aloud so the others can reflect upon it while the paper moves around the group. 3. Ensure that all members have an opportunity to write their ideas down on the paper.	1. In a course on scientific principles: "Identify important scientific discoveries of the 20th Century in the field of medicine".[4]	1. Use for review or for brainstorming lists – fairly simple, straightforward prompts that keep the paper moving around the group. 2. Encourage student to respond to the comments of those who have already written on the sheet. 3. Follow-up with group or whole-class discussion using the round-table papers as a base or departure point. 4. Use in conjunction with the "muddiest point" strategy: students write down their muddiest point, check those muddiest points that have already been written by others and expand as appropriate. The instructor may follow up by facilitating a discussion of the muddiest points. 5. ★ Use students' screens to project the prompt for the activity. 6. ★ Room layout facilitates the use of small groups. 7. ★ For follow-up, project both the round-table papers and the prompt using the dual-source projectors. 8. ★ Students at the same table can be split into two groups, which can share their responses to different questions/topics. 9. ★ Students can use the computers to write down each person's answer, creating a file that can be saved and emailed to the whole class. Or they can use the writable walls to respond to the instructor' prompt.
21. **Information search**	• Develop research skills and team collaboration	1. Create questions that can be answered by searching information from several sources 2. Have students search for information in small teams 3. Review answers as a large class	In a case Law course provide student groups with a question like "Provide examples of 2 decisions that support your position and explain your reasoning."	★Access to computers facilitates searching for relevant information. ★Groups can share information using the screen-sharing capabilities.
22. **Directed Questioning**	• Promote active student involvement in class • Determine student comprehension of content • Apply content	1. The instructor provides engaging challenging questions or asks for guidance during class time. 2. Groups work on their responses 3. Students then provide answers, either working individually, with a partner, or in a small group.		★Table configuration facilitates small group discussions

[4] Barkley, E.F., Cross, K.P., and Major, C.H. (2005), p. 242

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23. **Test-taking teams:** **Readiness Assurance**	• Students become actively engaged with the course content through collaboration with peers. • Students are responsible and accountable for their own learning and for contributing to a team.	1. Prior to the session, assign a reading that addresses key concepts related to the material students will encounter in *that* session. 2. Create an assessment with multiple-choice questions addressing key concepts from the reading. 3. When students arrive, have them fill out the assessment individually. 4. Form small groups of students and have students arrive at consensus regarding the answer most suited to each question, explaining their rationale. 5. Reconvene as a whole class, and ask a representative from each group to indicate the agreed-upon response at the same time. 6. Discuss any variability in responses, responding to questions that arise. Explain that these concepts will provide the framework for the day's session.	1. Example question that encourages discussion and draws students' attention to key points of the reading in a curriculum instruction course: *Which of the following best describes the meaning of the author's phrase "novice culture" in characterizing aspects of many universities' approaches to improving learning?* a. The university promotes mentoring between "novices" (students) and "experts" (instructors) b. Students establish their own communities of practice, assimilating knowledge from peers c. Reform and improvement efforts are more often mechanical and particularistic, rather than based in systematic research and the wisdom of practice d. A culture that emphasizes the role of the student as a beginner, who requires the guidance of more qualified leaders to learn.	1. Create multiple-choice questions carefully so that the answers require discussion and are not all immediately obvious. Have students choose the *best* answer and be able to justify their response 2. Encourage students to be able to rationalize their responses to their teammates. This is a process that encourages discussion resulting in consensus, not simply a matter of the majority vote. 3. The instructor may give students the decision (within reason) of what percentage of their grade associated with test-taking teams is derived from their individual score versus the group score. 4. ★ Have students work at their tables to come to consensus, prior to reconvening as a whole class to vote. Have students vote electronically using clickers or gather their responses on room computers for screen sharing.
24. **Think-Pair-Share**	• Students organize prior knowledge. • Students, summarize, apply, or integrate new information. • Students build individual accountability and contribution: each student reports to a partner, and partners summarize in a short report to the class.	1) Individuals reflect on (and perhaps jot down notes) in response to a question. 2) Participants pair up with someone sitting near them and share responses / thoughts verbally, or they may choose to work together to create a synthesis of ideas or come to a consensus. 3) The discussion leader randomly chooses a few pairs to give summaries of ideas.	1. In a medical course, students offer potential diagnoses and treatments based on photographs of conditions and case histories. 2. In a classroom management course, ask students how they would respond to an off-task student's interruptive behavior. Have students come up with a solution individually, then pair with a classmate, justify it and come to a consensus on an appropriate approach to this scenario.	1. Intentionally choose different pairs to give summaries of their ideas each time this activity is carried out. 2. After the pairs have discussed their responses, have two pairs discuss together, in lieu of randomly choosing pairs to report out to the entire class. 3. Use visual stimuli (e.g. photographs) as a prompt for discussion 4. ★ Wheeled chairs facilitate quick pairing. 5. ★ Pairs can give summaries to their larger table groups, thereby giving all students more time to present. 6. ★ Instructor can circulate through the classroom to hear students' thoughts due to the sufficient space surrounding the tables. 7. ★ Whole group sharing (depending on goal) can use the screen sharing facilities)

Strategy	Purpose	Description of Strategy	Examples	Implementation Suggestions and Variations[1]
25. Simulations	• Students apply their knowledge of structures, concepts, and best practices to virtual or other situations that simulate real-life occurrences. • Instructors and students reflect upon the students' response	1. A person, system or computer program demonstrates an action, symptom or scenario to which students are expected to respond. 2. Given the information presented, students take the appropriate action or give a detailed verbal explanation of what they would do to solve the problem or address the situation. 3. Students and instructor debrief, discussing the simulation and students' responses.	1. Students in a health and safety course practice using a defibrillator with a lifelike mannequin. 2. Students in an investment course buy and sell stocks in a trading room simulation, evaluating the success of their portfolio and explaining their rationale for various decisions made.	As a variation, students may take turns simulating (through role play) the appropriate action, symptom or scenario, to which classmates then respond.
26. 3-step Interviews	• Instructor determines students' comprehension of course content • Students improve communication, paraphrasing and small-group presentation skills • Students learn from and about their classmates	Form groups of 4 students; each group is further divided into two pairs (A-B and C-D). 1. Student A interviews student B, while student C interviews student D. The student asking questions listens and asks for further details. 2. Student B interviews student A, while student D interviews student C. 3. Students A and B summarize one another's responses to the other two students, then vice versa.	1. In a music appreciation course: "What musician recording today do you think people will still be listening to in fifty years, and why?"[5]	1. Use this strategy to help students explore opinions or experiences related to course content, thereby activating their prior knowledge. 2. Create interview questions that will not all generate the same responses, but rather will result in a diverse offering of comments and interpretations. 3. Students develop interview questions around a central theme 4. Students report results of the interview in a written format that is related to the course (e.g. business case, essay)

References / Resources

Bean, J. (1996). *Engaging ideas: The professor's guide to integrating writing, critical thinking, and active learning in the classroom.* San Francisco: Jossey-Bass.

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Youngblood, N., Beitz, J. (2001). Developing critical thinking with active learning strategies. *Nurse Educator* 26(1).

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[5] Barkley, E.F., Cross, K.P., and Major, C.H. (2005), p. 122

Principles for Designing Teaching and Learning Spaces

The National Survey for Student Engagement (NSSE) is a respected indicator of student engagement used by over 1450 universities across North America. Their Engagement Indicator themes and High-Impact Practices[1] (2013) are based upon extensive educational research. The indicators and practices have been adopted at McGill University as five principles to be considered when designing or renovating classroom spaces to support student learning. This permits the university to ground decisions about classroom features in research-based principles. The *Principles for Designing Teaching and Learning Spaces* below consider the classroom environment within the context of what is known about students' learning. These Principles are then translated into specific design features to guide design decisions, such that learning spaces become a physical manifestation of the university's teaching and learning vision.

1. Academic challenge

Learning spaces should allow students to actively engage with content and include a range of technologies that support multiple modes of teaching and learning.

2. Learning with peers

Learning spaces should provide features that permit students to work both individually and in collaboration with one another.

3. Experiences with faculty

Learning spaces should facilitate communication and interaction between students and faculty.

4. Campus environment

Learning spaces should be consistent with the university's culture and priorities as reflected in the campus master plan, follow university design standards, and be designed with future flexibility in mind.

5. High-Impact Practices (HIPs)

Learning spaces exist within a larger campus context; there should be an ease of transition between spaces so as to better support high-impact practices inside and outside the classroom.

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[1] http://nsse.iub.edu/2013_Institutional_Report/pdf/Benchmarks_to_Indicators.pdf

Please cite as follows: Finkelstein, A., Ferris, J., Winer, L. & Weston, C. (2014). Principles for designing teaching and learning spaces. Montreal: Teaching and Learning Services, McGill University.

Principles for Designing Teaching and Learning Spaces

	Layout	Furniture	Technologies	Acoustics	Lighting/colour
Academic challenge: Promote individual, active engagement with content	☐ Work surfaces for notebooks, laptops, textbooks	☐ Comfortable furniture; ☐ Varied furniture to support different types of tasks and preferences	☐ Access to infrastructure (e.g., printing, power for student laptops) ☐ Access to resources (e.g., LMS, internet, virtual labs, specialized software) ☐ Multiple sources and screens for simultaneous display of different learning materials	☐ Acoustic design to avoid distraction from outside and inside sources	☐ Appropriate lighting for individual work ☐ Intentional use of colour to promote focus
Learning with peers: Promote active engagement with one another	☐ Promote face-to-face communication (e.g., two rows of students on a tier, small groups) ☐ Individuals can move about easily ☐ Unobstructed sightlines	☐ Flexible seating(e.g., fixed chairs that rotate, movable tables and chairs, tablet chairs on wheels) ☐ Intentional use of furniture of different heights and shapes	☐ Shared workspaces (e.g., writable walls, digital workspace)	☐ Sound zones support multiple simultaneous conversations ☐ Appropriate amplification available (e.g., student table microphones)	☐ Different lighting patterns to support different activities ☐ Using colour to define groups' use of space
Experiences with faculty: Promote interaction and communication	☐ Easy access to all students (e.g., multiple aisles, unobstructed sightlines)	☐ Podium doesn't interfere with sightlines, movement and interaction, while being large enough for instructional materials. ☐ Flexible furniture to support different teaching strategies (e.g., movable, variable heights)	☐ Screen sharing ☐ Ability to control classroom technologies away from the podium (e.g., remote mouse, wireless projection)	☐ Sound zones support multiple simultaneous conversations ☐ Appropriate amplification available (e.g., wireless audio amplification)	☐ Different lighting patterns to support multiple types of teaching tasks ☐ Colours distinguish purposes (e.g., where chairs go, what groups work on what surfaces/with whom)
Campus environment: Promoting high-quality learning spaces across campus	This category relates to the campus environment as a whole. It provides opportunities for supporting students' learning through consistently high-quality learning spaces through the application of standards and design principles. For example: ☐ University standards applied, e.g., classroom and IT standards; accessibility guidelines; recognized sustainability practices, materials and technologies; regulated building operations (e.g., temperature and ventilation). For further details and/ context, see McGill University Classroom Guidelines and Standards ☐ Design classrooms for flexible future use where possible (e.g., raised floors for conduits to permit future classroom reconfiguration). ☐ Design classrooms, consistent with the principles of Universal Design and Universal Design for Learning, to meet the needs of and be used by all populations using these spaces (e.g., natural light, sufficient storage, standardized room controls to facilitate use of multiple classrooms). ☐ Design classrooms to integrate with surrounding space (informal spaces, etc.) ☐ All classrooms are thought of within the campus master plan.				
High-Impact Practices (HIPs)	Multiple types of campus physical environments are needed to support a variety of HIPs. Ensure availability of, and support for, a diverse range of affordances (both physical and virtual) to maximize HIPs for student learning.				

<div align="center">

Learning Environment Advisory Group
Minutes
June 4, 2024
3pm – 4pm, Hyflex Meeting Option: Microsoft Teams/G113

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Attendees: Awneet Sivia, Bryan Wilkinson, Melanie Opmeer, Soowook Kim, Brian Wright, Michelle Johnson, Lily Chan, Masud Khawaja

1.0 Welcome and Territorial Acknowledgement
 a. ADD 3.0 ITS Update
 b. Update on action items from last meeting.
 - The Teaching and Learning Faculty Survey is being issued at the end of August 2024.
 - Will know more at a later date about the Indigenous Classroom in TEP.
 - Proposed classroom tours being considered for New Faculty Kickstart.

2.0 Classroom Arrangements Pilot Project – Fall 2024 (Awneet Sivia)
Seven classrooms in D building on the Abbotsford Campus are being set up in small group format. Awneet sent out an email to all faculty using these classrooms to let them know the default will be set up in small groups. These specific rooms all have moveable table and chairs. The committee agreed to keep the pilot going using the same classrooms for Fall 2024.

3.0 ITS Update (Brian Wright)
 a. Received classroom enhancement funding to enhance class technology.
 b. Looking at testing Documents cameras for classrooms. These cameras can double as a webcam with a pivoting head to show videos, with integrated microphones.
   Comments:
 - Add a floor stand to the document camera so it doesn't go on a desk.
 - TLC to get info from the Office of the Registrar on spaces being used by various disciplines.

4.0 LMS Review (Awneet Sivia)
Three vendors were invited to do a demonstration, BB Ultra, Canvas, and D2L Brightspace. Scoring will happen in June and contract negotiations will be in July.
A LMS website is being worked on, and the new LMS will be rolled out Summer 2025.

5.0 Round table
 - Not enough classrooms and looking at changing up class times to accommodate more f-2-f classes. Having more cameras would be helpful.

6.0 Membership and Priorities for 2024-2025
Membership:

- Looking to add more faculty reps to the committee.
- Advise TLAC, STLC and Accessibility Committee

Priorities:
- Learning environment guidelines
- Rubric of effective learning environment setup for classrooms
- Make the New Faculty Launch program mandatory
- Have notifications that tell faculty what room they are teaching in
- Send emails to instructors itemizing items in their classroom and resources to be used
- LMS to link room to course so faculty can see the room

7.0 Adjournment
The meeting adjourned at 4 pm.