



## Active Learning in Continuing Education Live Activities

Learner-Instructor Interaction	Learner-Learner Interaction	Learner-Content Interaction	Multi-Component interaction
<p><b>Discussion of needs assessment</b> Participants complete a needs assessment survey before the activity, and instructor discusses the results during the activity.</p>	<p><b>Discussion in pairs</b> Ask participants to think or write about an answer for one minute, then turn to a peer to discuss their responses for two minutes. Ask pairs to share their thoughts with all.</p>	<p><b>Providing framework for notes or accessing/processing information</b> Participants receive a paper-based or technology-enhanced framework that supports/includes taking notes, saving selected slides, fill-in-the-blank sheets of questions/partial outlines, completing memory matrix, using maps to review content, or accessing additional resources.</p>	<p><b>Simulation</b> Simulation technologies provide participants with an experience of working on an usually simplified simulated world or system (eg, working with a virtual patient, low-fidelity manikin, or high fidelity manikin).</p>
<p><b>Audience response system</b> Participants use wireless keypads or mobile devices to respond to polling or posttest questions, with the instructor providing feedback about the responses.</p>	<p><b>Small group discussion</b> Participants work together to discuss a case or solve a problem. Whiteboard space or chart paper could be used to support the work. At the end, participants are asked to show their solutions to the whole group and discuss any differences among solutions proposed.</p>	<p><b>Question logbook</b> Participants keep a list of their questions while working with the content independently.</p>	<p><b>Skills training</b> Participants are practicing skills, such as in surgical skills training. Skills training can include use of standardized patients.</p>
<p><b>Whole-group discussion</b> Participants are invited to elaborate on their thinking by providing explanations, evidence, or clarifications. Instructors provides the discussion framework or probing questions, and moderates the discussion.</p>	<p><b>Role-playing exercise</b> Participants act as characters in a simulated situation to solve a problem or practice communication technique.</p>	<p><b>Concept map</b> Participants are provided with or asked to create a concept map that is a graphical representation of the relationships between concepts in an integrated, hierarchical manner.</p>	<p><b>Serious gaming</b> Participants are engaged in a structured group interactive exercise or contest with rules to promote new perspectives, introduce new concepts, or reinforce definitions of terms.</p>
<p><b>Roundtable discussion</b> Instructors/panelists discuss the topic among themselves and engage</p>	<p><b>Individual plus group quizzes</b> Participants complete a quiz individually and then in small groups, with discussion. Both quizzes are graded and if the</p>	<p><b>Critical incident</b> Participants are asked to make written or verbal reports on a situation in which they were involved that evoked a strong</p>	<p><b>Problem-based learning</b> Participants learn about a subject by working in groups to solve an open-ended, real-world problem.</p>



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participants into the discussion.	group score is higher, the two grades are averaged; if a participant has a higher individual score, it does not get lowered.	positive or strong negative emotional response.	
<p><b>Interview an expert</b> Participant identifies an individual who has the attributes that are of interest and interviews this individual using questions typically provided by instructor. Interview can be followed by the participant reporting verbally to a learning group or writing a summary/reflection.</p>	<p><b>Quiz with discussion in pairs</b> Participants complete a quiz individually, then discuss their answer and rationale with a partner, and then complete the quiz again.</p>	<p><b>Name that</b> Participants receive a series of clues that lead to the correct answer, which can include specific items (e.g. diagnoses, procedures) and key features. This could be used as an element of a game.</p>	<p><b>Reader's Theater</b> Participants take any piece of narrative (case report, journal article, literature, reflection), analyze it, and develop a script. The script is used to perform, which is usually a read/walk through with a minimum of preparation or props. After performance, participants discuss the story, key learning issues, and solutions.</p>
<p><b>Pausing in lecture</b> Instructor inserts wait time in a lecture for participants to reflect on, discuss and, when appropriate, apply ideas just presented. A similar technique, clarification pauses, involves an instructor pausing after stating an important point and asking if anyone needs to have it clarified.</p>	<p><b>Jigsaw</b> Participants work in small groups to read information that has been organized into sections. Each participant reads one section and then shares that information with the rest of the group. The exercise includes prompts, such as "How can this idea be applied to help understand the concept? What do you agree/not agree with?"</p>	<p><b>Application cards</b> After participants have read or heard about an important principle, generalization, theory, or procedure, each receives an index card to write down at least one application to practice for what they have just learned.</p>	<p><b>Minute paper</b> Participants are given a minute to write a response to a question that requires them to reflect on their learning or to engage in critical thinking. A variation of this strategy is inviting participants to write a statement about where they are still confused. This exercise can be followed by participants sharing their responses and discussing with others.</p>
<p><b>Learning contract</b> Participant and instructor develop an agreement that typically specifies learning goals, strategies and resources for learning, benchmarks for monitoring</p>	<p><b>Sorting strips</b> Participants receive the steps in a process (or various categories to be organized into a sequence) on strips of paper and work together to</p>	<p><b>One sentence summary</b> At the end of a discussion, participants are asked to summarize the discussion in a one-sentence format: What, how, why?</p>	<p><b>In three words</b> Each participant receives a large sheet of paper and marker and is asked to write his/her 3 words or images on the sheet. Participants then show their words to all and then the instructor debriefs to</p>



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learning progress, and timeline.	reconstruct the proper sequence.		explore common themes and unique ideas.
<b>Direct paraphrasing</b> Participants are asked to paraphrase part of a session for a specific audience and purpose, using their own words.	<b>Categorizing grid</b> Participants sort the terms/images into the provided grid with categories. Then, instructor asks volunteers to share their grids and answer questions.	<b>Defining Features Matrix</b> Participants are asked to categorize concepts according to the presence or absence of important defining features.	<b>Scavenger hunt</b> Participants are given a list of findings to discover in the course of their experiences
<b>Summarizing another participant's answer</b> A participant is asked to repeat another participant's answer or comments.	<b>Demonstrations</b> Ask participants to predict the result of a demonstration and briefly discuss with a neighbor. After demonstration, ask participants to discuss the observed result and reflect on a difference with their prediction.	<b>Pro and con grid</b> Participants write a list of pros and cons related to a topic.	<b>Posters</b> Participants work on groups to present their ideas on a sheet of chart paper. Once posters are created, one member from each group stays with the poster to explain it as other participants circulate to look at all of the posters. Participants rotate standing by their poster.
<b>Question and answer session</b> Instructor answers participants' questions.	<b>Visual Lists</b> Participants are asked to make a list (eg, pros and cons of a position) by working in groups. Then, invite participants to analyze the lists with questions appropriate to the exercise.	<b>Response to Teacher-Centered Activity</b> Participants are asked to write a paragraph that begins with "I was surprised that..." "I learned that..." or "I wonder about..." This allows the participants to reflect on what they learned from the presentation.	<b>Fish bowl</b> A small group of participants discuss ideas or concepts that have alternative explanations while the rest of the participants observe and take notes.
	<b>Panel Discussion</b> Participant groups are assigned a topic to research and asked to prepare presentations. One panelist from each group is then expected to make a short presentation, before responding to the questions from the audience.		<b>Idea line up</b> Instructor provides a question that may have a continuum of responses. Participants are directed to position themselves on a line to indicate their level of agreement in response to the question. Then, participants talk to the



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			person next to them to explain their position. Participants listen to each other's claims and evidence and respond with evidence to counter or support the claims of their peers. If participants should consider several claims, this exercise could be organized as "four corners."
	<p><b>Debates</b> When the content easily divides into opposing views, participants are assigned to debate teams, given a position to defend, and then asked to present arguments in support of their position.</p>		<p><b>Use of social media</b> Social media sites can function as a platform for participants to exchange advice and medical information throughout their healthcare training.</p>
	<p><b>Brainstorming</b> Facilitator and participants are engaged in a group activity technique designed to generate a large number of ideas for the solution to a problem</p>		<p><b>Augmented Reality</b> Participants experience a real-world environment where the objects that reside in the real world are enhanced by computer-generated perceptual information, sometimes across multiple sensory modalities.</p>
	<p><b>Speed-dating</b> Participants engage in a series of structured 1:1 interactions to exchange knowledge and promote networking and collaboration.</p>		<p><b>Virtual Reality</b> Participants experience a simulated environment that can be similar to or different from the real world. A participant using virtual reality equipment is able to look around the artificial world, move around in it, and interact with virtual features or items.</p>



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	<p><b>Ice Breaker Activities</b> There are numerous ice breaker strategies to be used at the beginning of an activity. For example, in a puzzle game, each participant writes one skill that they can contribute to collaborative patient care on a blank piece of puzzle. Then, participants introduce themselves and share their skill with the group. The puzzle is then assembled to show that everyone contributes to the whole.</p>		<p><b>Mixed reality</b> Participants experience mixed reality that is the merging of real and virtual worlds, where physical and digital objects co-exist and interact in real time.</p>
	<p><b>Perspective Taking</b> Each participant is asked to adopt the perspective of someone else involved in the situation. The exercise involves comparing perspectives through debriefing or some other structured format.</p>		
	<p><b>Evaluation of Another Participant's Work</b> Each participant evaluates their partner's work and depending on the nature of the assignment gives critical feedback.</p>		



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