USC Center for Excellence in Teaching

# Active learning facilitation in clinical settings

## WHAT IS THIS RESOURCE?

Active learning describes instructional approaches where students engage in experiential, interactive or reflective work. This document provides a planning guide for facilitating active learning in a variety of clinical or simulated settings as well as examples to get started.

## HOW DO I USE IT?

After identifying an active learning strategy you would like to use, review the suggested pre- during- and post-activity steps for both students and the instructor in order to plan your implementation. Consider the guiding questions to adjust your approach. For assistance, please [contact CET](http://cet.usc.edu/). Individual, [one-on-one appointments with CET](https://cet.usc.edu/contact-us/) may be made to discuss additional clinical teaching strategies.

### Active Learning Definition

Active learning is a broad term that describes activities in which learners actively engage with material. Active learning activities can be short or extended and can take place in groups, pairs or individually. Short active learning sessions can serve to break up lecture or didactic teaching to allow for reflection, evaluation or synthesis of material. Active learning can:

* Promote retention,
* Increase motivation,
* Improve application and transfer of knowledge.

Active learning can also increase student performance, communication, and critical thinking skills. Active learning can improve clinical skills by preparing students to become lifelong clinical learners.

### A process for implementing active learning

#### Pre-activity steps

* Instructor prepares the physical or digital space and materials that will be needed,
* Instructor provides the activity requirements and how this activity is relevant to the student’s learning,
* Identify what materials will need to be prepared,
* Determine what communication needs to be shared with students so students can prepare,
* Calculate will you make student groups (if needed),
* Consider how will activities or deliverables be assessed,
* Identify strategic questions to guide students.
* Determine what course content is required to be able to perform the task(s),
* Plan debrief questions that tie the purpose of the activity back to course content.

#### During the activity

* Students perform active learning tasks,
* Instructor facilitates, monitors, and keeps time,
* Consider how students will perform the task(s),
* Identify how much time is needed for each part of the task(s),
* Consider how will you guide progress and keep time,
* Consider presenting information in 5-10 minute increments and then asking students to reflect, discuss, or otherwise intentionally engage with the material,
* Relate the activity and content back to course concepts that may have been addressed previously,
* Provide individual or group time for critical reflection of the material.

#### 

#### Post-activity steps

* Students submit any individual or group deliverable,
* Instructor leads a debrief to tie activity back to purpose and content,
* Instructor performs any appropriate assessment, evaluation, feedback or grading.

### Examples of active learning activities in the clinical setting

#### Think-pair-share

**Activity description:** Learners are presented with a question or questions and given a moment to reflect (think) on their own answer without assistance. Students then compare answers with other students in a pair before answers are finalized by sharing with the group. The instructor can then repeat the process, if appropriate, to continue to develop ideas.

**Benefits and rationale:** *This activity is brief and therefore simple to plan and implement. Students get a chance to try out their reasoning and parse questions in conversation with a peer before sharing to the larger group or instructor. Additionally these exchanges can be a chance to build community in the group, and for instructors to informally assess student understanding in an ongoing way.*

**Example 1:**

* **Think:** Reflect on the challenges of providing patient-centered care in a busy hospital setting. What barriers do healthcare providers face, and how can they be overcome?
* **Pair:** Share your insights with a partner and discuss strategies for enhancing patient-centered care within the constraints of a hospital environment.
* **Share:** Present your group's most compelling strategies for improving patient-centered care to the class and engage in a class-wide discussion.

**Example 2:**

* **Think:** Reflect on the recent advancements in telemedicine and its potential benefits and challenges. How has it transformed healthcare delivery?
* **Pair:** Share your thoughts with a partner and discuss the ethical, legal, and technological aspects of telemedicine.
* **Share:** Share your group's assessment of the impact of telemedicine on healthcare and engage in a class-wide conversation about its future.

#### 5-minute research project

**Activity description:** Learners are presented with a topic and given 5 minutes to research it using any available resources. Students briefly report what they learned from their research.

**Benefits and rationale:** This can be a low-stakes way to bolster research skills. Additionally, this practice also normalizes the idea that instructors, like clinicians, will not always know an answer and therefore need to employ lifelong learning skills to implement new information into their practice.

**Example 1:** Choose a common medical condition (e.g., hypertension, diabetes) and, in 5 minutes, research the latest epidemiological trends associated with it. Share any key findings and potential implications for healthcare.

**Example 2:** Identify a patient population or demographic group (e.g., elderly, pediatric) and explore recent research focused on improving healthcare outcomes for this group. Discuss any innovative approaches or interventions you find.

#### One minute preceptor

**Activity description:** During this activity, the clinician instructor would provide a topic to learners and discuss the topic using the following steps:

* Get a commitment.
  + What does the learning clinician know about the topic?
* Probe for supporting evidence.
  + Ask questions that connect to previously learned material.
* Reinforce what was done well.
* Give guidance about errors and omissions.
* Teach a general principle.
* Conclusion.

**Benefits and rationale:** This activity can provide relevant experiential learning to promote clinical reasoning skills, to develop comfort with oral examination and thinking on one’s feet, and to model preceptor practices for when the learning clinician trains or mentors others in the future.

**Example 1:** Present a concise summary of the patient's case, including relevant history, physical findings, and lab results. What's your leading diagnosis, and what key factors support it?

**Example 2:** Let's discuss your interaction with the patient's family during rounds today. What went well, and what could have been improved in terms of communication and building rapport?

#### Journal clubs

**Activity description:** During this activity, the clinician instructor would assign research articles or clinical studies relevant to a specialty. Participants would read and critically appraise the articles. A group discussion would take place to evaluate the study’s methodology, results, and implications for clinical practice.

**Benefits and rationale:** This can instill a culture of lifeling learning, encouraging professionals to partner with peers to continue seeking new knowledge and evidence throughout their careers. By critically evaluating research articles, journal club participants become more adept at incorporating evidence-based practices into their clinical decision-making. This leads to better patient care.

**Example 1:** Provide a set of clinical practice guidelines related to the article's topic. Participants must assess whether the research aligns with or contradicts the existing guidelines and discuss the implications for clinical practice.

**Example 2:** Provide a structured critical appraisal worksheet or template that participants must complete for the assigned article. The worksheet may include sections for assessing study design, sample size, statistical analysis, biases, and conclusions. Participants can then discuss their evaluations during the meeting.

### Additional sources

* Burgess, A., van Diggele, C., Roberts, C. et al. (2020). [Key tips for teaching in the clinical setting](https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-020-02283-2). BMC Med Educ 20 (Suppl 2), 463.
* Graffam, B. (2007). [Active learning in medical education: Strategies for beginning implementation](https://www-tandfonline-com.libproxy2.usc.edu/doi/full/10.1080/01421590601176398). Medical Teacher, 29(1), 38–42.
* Pivač, S., Skela-Savič, B., Jović, D. et al. (2021). [Implementation of active learning methods by nurse educators in undergraduate nursing students’ programs – a group interview](https://bmcnurs.biomedcentral.com/articles/10.1186/s12912-021-00688-y). BMC Nurs 20, 173.
* van Diggele, C., Burgess, A. & Mellis, C. (2020). [Planning, preparing and structuring a small group teaching session](https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-020-02281-4). BMC Med Educ 20 (Suppl 2), 462.