MD Program
UNIVERSITY OF TORONTO

Office of Faculty Development

A CBL primer: Guided Learning in Case-based Learning

What is Guided Learning?

Guided Learning or guided instruction is one approach tutors can use to facilitate small group discussions that offers systematic support when students get stuck.

To guide learning tutors can use:

- questions,
- prompts,
- cues and
- direct explanations.

CBL tutors have found that this approach also approximates teaching techniques they use in their clinical practice with medical students and residents.

Using Questioning, Probing, Cueing, and Explaining, and Modelling to guide student learning[1]

Purpose	Sample Questions
Questioning to determine "What do students know" Consider the following: *Do students understand the terminology being used in the case or assignment?* *Key concepts highlighted in the week's case?* *Mechanistic explanations for clinical features?* **Questioning to determine "What do the students not know"** Consider the following: *Is there any part of this week's material that is unclear?* *Do any of the assignment answers suggest that students may not understand a particular content area?* *To what extent are the students linking background knowledge (lectures, e-Modules, previous week's learning) with new concepts (this week's learning)?* *Are there any fundamental errors or misconceptions getting in the way of understanding?*	**Clarification:** Who? What? When? Where? Why? How? **Determine how students are using existing knowledge:** Why do we see "x" in this medical condition but only in certain patients? **Elaborate:** Can you tell me more about that? **Clarification:** Why did you choose that answer? Specific examples from CBL tutors: • What is the difference between the terms "etiology" and "pathophysiology"? • Once a term is clarified ask: If we use this understanding of the term (X), how would you adjust your answer to this question in your assignment? • Can you explain what "palpitation" means? • How would you explain to a patient what congestive heart failure is? • Why do we see a particular clinical feature (Y) in patients with disease (X)? • Can you walk through your thinking and process you used to respond to this question? • What are common misconceptions you know that students tend to have about a specific illness or concept? Probe students to identify if they have these misconceptions and purposefully point this out as a common misconception and explain why. (Draw purposeful attention to potential blind spots.) • Tell me more about your choice of probable diagnosis X. Why do you think that it may not be diagnosis Y? (probing for reasoning) Another way to assess understanding is to see if the students can apply the knowledge. For example: Analyze: How do you use the lab results to determine…? Compare: How are x and y alike? How do they differ? Compare the risks and benefits to treatment of x and y? Evaluation: What is the most… way to diagnose x?

Why Consider Using Guided Learning Strategies in Case-based Small Group Facilitation?

In case-based learning tutors play a more directive role. They:

- catalyze discussion,
- detect gaps and misunderstandings,
- assist in directing students to educational resources, and
- overall provide more guidance in the tutorial.

A teaching and learning process such as guided instruction, represents a shared responsibility between the teacher and the student and provides strategies for the tutor that still require learners to explore the case and engage in discovery learning.

How Can We Use This Approach?

- To prepare CBL tutor guides
- When preparing for your CBL session identify potential misconceptions and prepare potential questions, prompts, or cues
- During the tutorial when you may wish to ensure students understand a key concept

Prompting to help facilitate students' thinking process If students are struggling with responding to questions that are probing for understanding consider using prompting: *Prompt students to connect with background knowledge* *Prompt students to consider process or procedural knowledge*	Was there anything in your Monday lectures that may help us think about this concept as it may apply to this patient? What did you take away from the e-Module on "X" that may have relevance to this question? Do you know anyone who lives with this condition? What is their experience?
Cueing to shift students' attention to focus on specific information, errors, or partial understanding Has been shown to have positive effect on retention and transfer of information. Can be used together with prompts or on their own.	Verbal cues: "This is important…" "The next step is …" "This is a tricky part. Be sure …" Emphasis cues: Repeat a student's statement. Pausing after beginning a statement to allow students to complete the thought. Visual and graphic cues: Use pictures (X-ray), models, tablets (results from studies), figures, graphs, flow diagrams to help cue students to an area they may be struggling with. Gesture cues: Nonverbal communication - exaggerate information.
Explaining and Modeling When questions, prompts, and cues don't lead to desired results and when students do not have sufficient knowledge to complete tasks on their own. Can provide content that learners may need and the encouragement to persist.	Direct explanation: Explicitly states the answer or the diagnosis and thinks aloud, demonstrating the reasoning involved in coming up with the response. Includes the facts, steps, and when or why to do it. Key is for students to see and understand the rational for the decision making (e.g. clinical reasoning, clinical decision-making). Modelling: Demonstrate a skill or problem-solving strategy to complete a task. Teacher think-alouds: Describe what the teacher did to understand a concept or demonstrate how guidelines were applied. Student think-alouds: Guide students to explain what they thought of first when encountered the question, and then next etc.

1 MD Program, University of Toronto (2016) adapted from Fisher, D., & Frey, N. (2010). Guided instruction: How to develop confident and successful learners. Alexandria, VA: ASCD