

Precept2Practice Podcast | Socratic Questioning

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What is Socratic Questioning? (aka Socratic Method, Socratic thinking, Socratic discussion)

- Teaching technique employed to enhance critical thinking skills
- Uses a series of structured questions to assess learners' current knowledge base, uncover knowledge gaps, and facilitate decision-making with sound rationale
- Helps learners use their own reasoning to facilitate thinking and learning

How is Socratic Questioning Different from Other Questioning Methods?

- Questions are used to evaluate knowledge in order to build upon that knowledge (not to serve as a final evaluation of knowledge)
- Questions are connected to one another (not a listing of unrelated questions)
- Method is utilized in a supportive environment not meant to humiliate learner or establish hierarchy of expertise (i.e., Socratic dialogue is not the same as “pimping”)

Important Considerations

- Create a “safe” learning environment where the learner understands: (1) the value of questions in honing and refining thought, (2) the goal of Socratic questioning is to advance knowledge and not demean/demoralize learner, and (3) it is “okay” to have a “wrong answer”
- Encourage learners through use of positive/reinforcing feedback to maintain engagement and minimize stress levels
- Watch for learners' signals of exhaustion or frustration (know when to say when)
- With practice, learners will be able to self-apply these principles (overarching goal)
- Utilization of this method is time intensive and requires significant effort on the part of the questioner and learner; balance the use of this teaching tool with workload responsibilities of both teacher/preceptor and learner
- Socratic questioning may not apply to all learning opportunities
- Display of intellectual humility by questioner is likely to build trust and credibility with learners. Example language includes:
 - I don't know the answer to that important question...
 - I'm not sure there is a definitive answer to that question...
 - Let's explore this thought together...

How Can Socratic Questioning Be Applied in Pharmacy Education?

- **Didactic education**
 - Small group discussion within workshops
 - Large classroom discussion

- **Experiential education**
 - Assess knowledge base
 - Hone clinical reasoning skills (including rationale for recommendations)
 - Facilitate topic discussions
 - Facilitate reflection of skills and performance (i.e., patient education, provider interactions, presentations)
 - Students reflect that they are initially intimidated by the intensity of Socratic discussions but grow to enjoy (and anticipate) questions

- **Other opportunities**
 - Advising and mentoring sessions
 - Reflection assignments

Example Socratic Questions to Evaluate & Advance Clinical Reasoning in Pharmacy Education

Question Type	Question Purpose	Example EE Question
Purpose	Define a task	What steps will you take to verify the accuracy of this prescription order?
Information	Assess source & quality of information	Please provide an evidence-based rationale for your recommendation of xyz (e.g., BP goal of < 140/90 mm Hg).
Interpretation	Examine how information is organized & evaluated	You ranked the patient's primary chief complaint as abc (e.g., hyperglycemia) with a secondary problem of xyz (e.g., chest pain) – can you elaborate on your thought process here?
Assumption	Assess what is being taken for granted	Have you considered this patient's co-morbidities (e.g., heart failure, end-stage renal disease) when determining your recommendation for treatment of xyz disease state (e.g., hypertension)?
Implication	Follow the path of thinking	In your case presentation you stated that your patient was admitted to the hospital for spontaneous bacterial peritonitis caused by end-stage liver disease – can you explain how you understand these two disease states to be related?
Point-of-view	Examine individual & global perspective	Why might health-systems and insurance companies be interested in reducing heart failure readmissions?
Relevance	Discriminate what is & is not worth considering	You seem to be focusing on abc (e.g., elevated WBC count) in this patient with xyz (e.g., pneumonia) who seems to be clinically improving – can you tell me more about why you think this parameter is vitally important in this scenario? Can you think of any iatrogenic causes?
Accuracy	Test for truth & correctness	You calculated this patient's CrCl as 43 mL/min while I calculated it as 72 mL/min – I want us to investigate why our numbers are so different. Can you help me understand what values you utilized in your calculation and why you did so (e.g., body weight, SCr)?
Precision	Give details & be specific	You stated that the target dose of abc drug (e.g., metoprolol succinate) is xyz (e.g., 200 mg/day) for the indication of systolic heart failure. How do you suggest we initiate and titrate this therapy for patient X? What monitoring parameters are important to follow?
Consistency	Assess for contradictions	Earlier in our conversation you said abc (e.g., bactrim covers community-acquired MRSA) and just now you said xyz (e.g., bactrim only has gram negative coverage). Do you feel that these statements can both be true?
Logic	Assess big-picture thinking	In your SOAP note you provide five recommendations for therapeutic regimen adjustments, which do you feel need to be addressed first and why?

Reflective Questions to Assess the Use of Socratic Questioning:

- Am I consistently using questions to build and deepen discussion?
- Do I make the goal of the discussion clear to my learners? (begin with the end in mind)
- Do I allow sufficient time for learners to formulate responses?
- Am I pursuing relevant information with the questions I ask?
- Do I focus on key ideas or concepts while facilitating discussion?
- Am I bringing questionable assumptions to the attention of the learner(s)?
- Do I call for clarification when needed?
- Do I call for more specific details when necessary?
- Do I think aloud with my learners? (to summarize what I hear you saying so far is...)
- What techniques have I successfully used to keep discussion moving forward when there is a stall/lag of discussion?
- What is the tone of the discussions?
- Are my learners improving in their ability to self-apply these principles or meaningfully contribute to Socratic discussions?

How Do I Get Started?

- Learn more about the Socratic Method through self-study or professional resources
- Evaluate current teaching setting and areas of expertise for applicable content
- Identify interconnections within topic area
- Practice with colleague
- Explore with students/residents

Recommended Resources:

1. Elder L, Paul R. The thinker's guide to the art of asking essential questions. 5th ed. Foundations for Critical Thinking Press, 2010. www.criticalthinking.org
2. Lewis DP. Using the Socratic method in office-based teaching. *Fam Med*. 2004;36(3):162-3. PMID 14999569
3. Oh RC. The Socratic method in medicine - the labor of delivering medical truths. *Fam Med*. 2005;37(8):537-9. PMID: 16145625 [Free full text]
4. Oh RC, Reamy BV. The Socratic method and pimping: optimizing the use of stress and fear in instruction. *Virtual Mentor*. 2014;16(3):182-6. PMID 24646846 [Free full text]
5. Oylar DR, Romanelli F. The fact of ignorance: revisiting the Socratic method as a tool for teaching critical thinking. *Am J Pharm Educ*. 2014;78(7):144. PMID: 25258449 [Free PMC article]
6. Paul R, Elder L. The thinker's guide to the art of Socratic questioning. Foundation for Critical Thinking Press, 2007. www.criticalthinking.org
7. Tofade T, Elsner J, Haines ST. Best practice strategies for effective use of questions as a teaching tool. *Am J Pharm Educ*. 2013;77(7):155. PMID: 24052658 [Free PMC article]
8. Weitzel KW, Walters EA, Taylor J. Teaching clinical problem solving: a preceptor's guide. *Am J Health-Syst Pharm*. 2012;69:1588-99. PMID: 22935942