

Guess What I'm Thinking: Avoiding the Game No Learner Wants to Play

Katherine A. Jordan, MD,^a Nicholas M. Potisek, MD,^{b,c} Eric K. Zwemer, MD^d

Clinical teachers ask questions to evaluate and promote learner knowledge. However, certain questioning styles risk running counter to this aim by being confusing and eliciting negative emotions in students.¹ “Guess What I’m Thinking” (GWIT)–type questions characterize a problematic questioning style because they can deflate learner confidence in their knowledge and educator confidence in their teaching skills. A GWIT question has been defined as “an open question, to which there are multiple possible right answers, but the educator is only interested in one of them.”² GWIT questions present a challenge to clinical educators and learners so a framework for avoiding this type of question offers an opportunity to improve learning.^{2,3}

In this article from the Council on Medical Student Education in Pediatrics series about great clinical teachers, we explore specific strategies to help clinical teachers ask better questions to promote clinical learning.

GUESS WHAT I'M THINKING QUESTIONS

A learner presents a case to their supervisor of a young toddler who presents with a cat bite. Aiming to teach the point that cat bites are at higher risk of osteomyelitis than dog bites

because of anatomic differences in incisors, the clinical educator asks the learner several questions.

Educator: What’s different about this patient compared to a patient with a dog bite?

Learner: Dog bites are more common.

Educator: Okay, but what about potential complications?

Learner: You shouldn’t suture cat bites because they’re more likely to get infected.

Educator: Sure, but what about longer-term complications?

Learner: Dog bites are more likely to inflict tissue damage and leave lasting scars.

Educator: True, but I meant more medium-term outcomes. Any ideas?

Learner: Um ... I give up. Sigh.

Educator: Well, that might have been a guess-what-I’m-thinking question. The answer is osteomyelitis.

The above exchange illustrates the drawbacks of GWIT-style questioning. By focusing on eliciting a particular response, the clinical educator missed several opportunities to reinforce and build on the learner’s correct

^aDivisions of General Pediatrics and Adolescent Medicine, and ^dPediatric Hospital Medicine, University of North Carolina School of Medicine, Chapel Hill, North Carolina; ^bDivision of General Pediatrics, University of South Carolina School of Medicine Greenville, Greenville, South Carolina; and ^cDepartment of Pediatrics, Wake Forest School of Medicine and Brenner Children’s Hospital, Winston-Salem, North Carolina

Dr Zwemer conceptualized the paper and reviewed and revised the manuscript; Dr Jordan drafted the initial manuscript and reviewed and revised the manuscript; Dr Potisek reviewed and revised the manuscript; and all authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.

DOI: <https://doi.org/10.1542/peds.2022-057450>

Accepted for publication Mar 23, 2022

Address correspondence to Katherine A. Jordan, MD, University of North Carolina School of Medicine, Division of General Pediatrics and Adolescent Medicine, 231 MacNider Hall, CB# 7225, 333 South Columbia St, Chapel Hill, NC 27599-7225. E-mail: katherine_jordan@med.unc.edu

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275)

Copyright © 2022 by the American Academy of Pediatrics

FUNDING: No external funding.

CONFLICT OF INTEREST DISCLOSURES: All authors have indicated they have no conflicts of interest relevant to this article to disclose.

To cite: Jordan KA, Potisek NM, Zwemer EK. Guess What I’m Thinking: Avoiding the Game No Learner Wants to Play. *Pediatrics*. 2022;149(6):e2022057450

replies. The learner gives many correct answers but may feel as though they have given only incorrect answers. Both learner and educator can become easily frustrated and deflated by this exchange.

STRATEGIES TO AVOID GWIT QUESTIONS

Shift the Question's Focus

Try shifting the questioning to focus on the learner's knowledge acquisition and development. Replacing "what is the most likely cause" with "what *do you think* is the most likely cause, *and why*" successfully draws attention to the learner's thought process. Framing a question around the student's thinking allows a broader range of appropriate answers and provides more insight into the learner's understanding. From our scenario, replace the GWIT question with "What do you think might be different between this patient and a patient with a dog bite, and why?" This subtle language shift removes some of the pressure of the question, creating psychological safety which is key for promoting learning.^{4,5} An accurate understanding of the learner's thought process allows the clinical educator the ability to provide targeted correction and teaching, leading into the next strategy.

Build on Answers

When the learner provides a correct answer, even when different from the intended answer, it is critical to acknowledge and reinforce the answer. Clinical educators can then incorporate additional learning points they want the learner to remember. For example, when our learner correctly discusses avoiding suturing a cat bite, a possible response could be, "You are correct. We typically don't close cat bites because of the risk of infection. The

other infectious complication I worry about for cat bites is osteomyelitis." By building on the learner's correct answer, you reinforce current knowledge while linking your new teaching point to their existing mental framework surrounding a topic.

Conversely, when a student is not sure of an answer, the clinical educator has the opportunity to explain the correct answer and extend the teaching points. For example,

Educator: What complication do you think is more likely with a cat bite compared to a dog bite and why?

Learner: I'm not sure. Maybe cat bites are more likely to need suturing because the teeth are sharp.

Educator: That is a great thought. You are right that cats have very sharp teeth. They can cause deep puncture wounds, which actually leads to an increased risk of infection such as osteomyelitis. To prevent infections, we try to avoid suturing cat bites. If we were worried about osteomyelitis, what signs or symptoms would you tell the parents to watch for?

This extension of the teaching point allows the educator to teach to their goal about osteomyelitis and allows them to correct other areas of the learner's thinking, including the mistaken idea about suturing. Note that in this exchange, the educator also praises the correct aspects of the thought process, and they can extend the discussion to another slightly easier question for the learner to answer. This method can boost learner confidence after a missed question compared to a simple correction.

Scaffolding

Similar to the extend and explain technique that builds on answers, clinical educators can also provide

scaffolding at the beginning of their questions. Experienced clinicians often are aware of connections between concepts that learners have not yet formed. By providing a scaffold of background information, students have additional direction in formulating their answers. One example to incorporate scaffolding is as follows:

"I agree with not suturing cat bites because of their increased risk of infection. Thinking about the difference in dental anatomy, cats have sharp incisors that penetrate much more deeply compared to dogs. Given the potential for a deep puncture wound from a cat bite, can you think of another subacute infectious complication in this setting?"

This additional clinical information guides students to new learning points and reinforces critical thinking skills. Scaffolding has been described as a way to foster more advanced levels of understanding in the clinical setting.⁶

Used collectively, these strategies give a clinical educator several methods to fully explore a learner's clinical acumen while avoiding the frustration that can arise with a GWIT questioning style.

STRATEGIES TO REDIRECT AFTER A GWIT QUESTION

Even experienced clinical educators will unintentionally ask a GWIT question or a question that inadvertently is unclear. When this occurs, these strategies will help the educator rescue the teaching moment.

Offer Choices

Clinical educators can introduce choices between answers when a concept is especially challenging, or to engage more timid learners. In our scenario, the attending can follow up the GWIT question with, "Do you think cat bites or dog bites

are at higher risk of osteomyelitis?" This technique allows the student to have more focus when providing their answer. It also provides a foundation for launching into the One-Minute Preceptor, a model based on highly effective microskills of teaching.⁷ After the student chooses an answer, the educator can probe for clinical reasoning by asking "why do you think that is?" The clinical educator can then communicate key points, reinforce learner knowledge, and address errors. Using this framework enables brief, effective teaching when facing real-world time constraints.⁷

Vulnerability

After asking a GWIT question, an educator has the opportunity to model vulnerability by acknowledging the poor question. An educator could say, "That question was not clear and is a 'guess what I'm thinking' question. Let me reframe it." By explaining their educational thought process, the educator displays "intellectual candor" which has been proposed as out-loud thinking to acknowledge an

and learning from missteps is a crucial part of medicine, but one that can be difficult, because it may threaten credibility.⁸ Being open after asking a GWIT question redirects the initial question and also provides an opportunity to gradually shift medical education culture to one that celebrates vulnerability and opportunities to learn.

In summary, clinical educators can use specific strategies to avoid GWIT questions such as focusing on the thought process, building on learners' answers, and providing context within their question. Together, these techniques remove guesswork for learners while supporting a positive learning environment.

ABBREVIATION

GWIT: Guess What I'm Thinking

REFERENCES:

1. McConnell MM, Eva KW. The role of emotion in the learning and transfer of clinical skills and knowledge. *Acad Med.* 2012;87(10):1316–1322

2. Epigeum, Ltd. Asking questions and eliciting answers. Available at: https://www.epigeum.com/downloads/uct_accessible/us/01_lecturing1/html/course_files/4_20.html. Accessed January 16, 2021
3. Kost A, Chen FM. Socrates was not a pimp: changing the paradigm of questioning in medical education. *Acad Med.* 2015;90(1):20–24
4. Long M, Blankenburg R, Butani L. Questioning as a teaching tool. *Pediatrics.* 2015;135(3):406–408
5. Stoddard HA, O'Dell DV. Would Socrates have actually used the "Socratic Method" for clinical teaching? *J Gen Intern Med.* 2016;31(9):1092–1096
6. Pylman S, Ward A. 12 tips for effective questioning in medical education. *Med Teach.* 2020;42(12):1330–1336
7. Neher JO, Gordon KC, Meyer B, Stevens N. A five-step "microskills" model of clinical teaching. *J Am Board Fam Pract.* 1992;5(4):419–424
8. Molloy E, Bearman M. Embracing the tension between vulnerability and credibility: 'intellectual candour' in health professions education. *Med Educ.* 2019;53(1):32–41

educator's areas of vulnerability in medical education.⁸ Acknowledging