Socrates Was Not a Pimp: Changing the Paradigm of Questioning in Medical Education

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Abstract

The slang term "pimping" is widely recognized by learners and educators in the clinical learning environment as the act of more senior members of the medical team publicly asking questions of more junior members. Although questioning as a pedagogical practice has many benefits, pimping, as described in the literature, evokes negative emotions in learners and leads to an environment that is not conducive to adult learning. Medical educators may employ pimping as a pedagogic technique because of beliefs that it is a Socratic teaching method. Although problems with pimping have previously been identified, no alternative techniques for questioning in the clinical environment were suggested. The authors posit that using the term "pimping" to describe questioning in medical education is harmful and unprofessional, and they propose clearly defining pimping as "questioning with the intent to shame or humiliate the learner to maintain the power hierarchy in medical education." Explicitly separating pimping from the larger practice of questioning allows the authors to make three recommendations for improving questioning practices. First, educators should examine the purpose of each question they pose to learners. Second, they should apply historic and modern interpretations of Socratic teaching methods that promote critical thinking skills. Finally, they should consider adult learning theories to make concrete changes to their questioning practices. These changes can result in questioning that is more learner centered, aids in the acquisition of knowledge and skills, performs helpful formative and summative assessments of the learner, and improves community in the clinical learning environment.

Questioning learners occurs daily in the clinical environment and plays a central, multifaceted role in medical education. Although the concept of asking questions seems a simple practice, many medical educators lack formal pedagogical training and thus teach the way they were taught. This generational transfer of instruction has resulted in a method of questioning known by the slang term "pimping."

Pimping as a Pedagogical Practice

Pimping in the literature

Brancati[1] first described pimping in a 1989 article, defining it as "whenever an attending poses a series of very difficult questions to an intern or a student." He suggests that questions "should come in rapid succession and be essentially unanswerable." Twenty years later, Detsky[2] revisited pimping and elaborated on its attributes: that it "occurs in settings … in which trainees at various levels convene with a faculty member to review patients" and "involve(s) direct questioning of individual students in the presence of their peers." Although these pieces are lighthearted, they both highlight the underlying purpose of pimping: to reinforce the power hierarchy of the team and, more specifically, the attending physician's place at the top. Further, Beck[3] describes ways students can protect themselves against pimping, indicating that it is an experience to avoid. One medical student published a poem specifically describing his unpleasant experiences with pimping, using the words "indignity" to describe his emotions and "worthless" to describe the perception his teacher held of him.[4] Collectively, these pieces all highlight the negative learning environment that results from the practice of pimping.

In 2005, Wear and colleagues[5] examined student views on pimping. Students defined pimping as "asking questions" and specifically emphasized its hierarchical nature: "attendings and residents pimp students but attendings also pimp residents." Pimping was a universal experience that occurred in operating rooms, in the hallways of hospitals between patients on rounds, or at the bedside. Students believed teacher motivation for pimping included assessing their knowledge base to remediate gaps and determining how students apply previously learned knowledge to the clinical situation.

Students divided pimping into "good" and "malignant" categories. "Good pimping" actions included questioning that advanced or enhanced the learning process and also encouraged students to be proactive about their learning. For example, students would read about relevant anatomy the night before a surgery because they knew they would be asked about it the next day. "Malignant pimping" frequently employed techniques designed to humiliate the learner. These techniques included "guess what I'm thinking" questions or testing knowledge so obscure that only the questioner would know the answer. All students in this study identified humiliation as an outcome of any type of pimping—even good pimping had a component of shame because of the public embarrassment of not knowing the answer. For this reason, they also viewed the experience as a

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significant motivating factor for their studies. Furthermore, almost all of the students indicated that they planned to be "good pimpers" when they were attending physicians. They believed it was useful to "promote learning, logical thinking, defending one's decisions, quick recall, self-assessment, and communicating well with one's peers."[5]

In another study that examined student perception of different radiology teaching modalities, participants described pimping as when attending physicians singled out one person in a group and either repeatedly asked that person questions or asked a question and moved on to someone else if the person did not know the answer.[5] Although 93% of students desired a teaching modality that involved voluntary responses to questions posed to a group, fewer (72%) felt pimping was an effective way to learn.[5] Instead, students preferred an interactive Socratic dialogue in a small group that relies on students volunteering to answer questions.[6]

There are several problems with pimping, both as a technique and as a term. The existing literature suggests that the current practice of pimping is largely a negative experience for learners and contributes to a negative learning environment; one review defined pimping as "teaching by intimidation."[7] In a response to Brancati's article on pimping, another educator outlined four mainly negative results of pimping: establishing a medical staff "pecking order"; suppressing "any honest and spontaneous intellectual question or pursuit"; creating a hostile atmosphere; and perpetuating "the dehumanization for which medical education has been criticized."[8]

Implications of pimping

Pimping has many negative implications for both the learning environment and the learners when examined in the context of learning theory, especially those that inform adult learning practices. Analyzing pimping with respect to four aspects of learning—learner, knowledge, assessment, and community—clarifies the role that it plays in medical education.[9] Pimping questions often ask for fact-based knowledge with answers that are either correct or incorrect. Even with questions about process, such as how a learner arrived at a diagnosis in the face of many possibilities, it is typically understood that a "right" answer exists—the one the questioner would choose despite the fact that there may be several valid approaches to a particular clinical scenario. In this context, pimping does not support the development of critical thinking skills. With its underlying purpose of inducing shame or humiliation, pimping neither considers the learners' needs nor aids in community building.

This active degradation of the learner and creation of a hostile learning experience is at direct odds with multiple adult learning theories, which recommend three key components to successful adult learning: mutual respect; a safe and supportive educational environment; and challenging learners in a nonthreatening way.[10,11] Adult learners may have difficulty effectively solving problems if their environment is disrespectful or decreases their self-esteem.[12,13]

Medical educators are also beginning to examine the role of situated cognition in clinical learning environments. This theory postulates that knowledge comes from the interaction between the person and his or her environment, both of which are given equal importance.[14] Therefore, a negative environment, such as the one created by pimping, may impede thinking and learning.

The main flaw with pimping as a pedagogical technique rests on the notion that it is not merely questioning but that it is questioning with the intent to cause discomfort in the learner as a means of maintaining medical hegemony. Furthermore, as described by Wear and colleagues,[5] some learners and teachers in the clinical environment indicate that all experiences involving the use of questions as a teaching technique should be labeled as pimping. Descriptive language is important, and labeling every use of questioning with a derogatory slang term has negative implications. The word *pimp* is most commonly used to describe a man who solicits clients for a prostitute. This word may evoke a negative affective response, and we would also argue that the use of such a derogatory term to describe an experience in medical education is unprofessional.

Despite the numerous problems with pimping as a term and teaching technique, it has been perpetuated for at least 25 years. This appears to occur for four reasons: It successfully although negatively motivates the learner, it is thought to reflect Socratic teaching methods, it maintains the power structure in the learning environment, and its transfer occurs through generations of teaching physicians who ultimately believe it to be useful pedagogically.[1,2,5] Perhaps pimping has persisted because thus far no one has suggested ways to improve the practice of questioning and alternatives to the slang term of pimping.

We argue that the term should be defined under its negative connotation to mean "questioning of a learner with the explicit intent to cause discomfort such as shame or humiliation as a means of maintaining the power hierarchy in medical education." Definitively separating the negative practice of pimping from the broader, pedagogically helpful technique of questioning accomplishes two things. First, it clearly elucidates pimping's negative implications for the clinical learning environment and, second, it creates an opportunity to improve questioning practices. Below, we offer suggestions for improving questioning practices in the clinical learning environment, informed by Socratic teaching methods and adult learning theory.

Historical and Modern Interpretations of Socratic Teaching Methods

Given that some medical educators believe pimping is an expression of Socratic teaching methods,[5] it is important to examine what Socratic teaching methods actually encompass. Understanding both Socrates's own purpose in using questions and modern interpretations of his teaching methods can inform helpful questioning practices in medical education.

Some scholars suggest that Socrates himself eschewed pedagogy and instead engaged others in an exercise of critical thinking through a dialogue of questions about ultimately unknowable truths.[15,16] However, the questions Socrates posed to individuals in a group served two distinct purposes.[17] First, they were meant to place a person's existing beliefs under scrutiny that would ultimately lead to their refutation. Known by the Greeks as

"elunchus," this cross-examination of a set of beliefs assessed whether they were mutually consistent. The refutation of beliefs led to a state of confusion and doubt, known as "aproria." The ultimate aim of elunchus followed by aproria was to create a common ground—a state of curiosity—among everyone in the group. From there the group could begin a collective search for truth through further discussion.

Modern interpretations of Socratic teaching methods across diverse settings, from elementary schools to universities, point to somewhat different goals. Although the implementation is different in each setting, three components are consistent: working collaboratively in groups; exploring interpretive questions that lack a specific answer but activate prior knowledge; and reflecting on the discussion.[18–20] These unique components could be described as modern Socratic principles. It is important to note that not all settings successfully implement these principles. Descriptions of law school, perhaps most similar to medical school, indicate that experiences adherent to these ideals result in a discussion perceived as beneficial by the students.[16] However, other law school experiences suggest that it is easy for Socratic teaching methods to devolve into humiliating the students, similar to medical students' experiences with pimping. This seems to occur if emphasis is placed on obtaining a "right answer" instead of reasoning skills, if there is an absence of legitimate discussion, and if there is no space for reflecting on the experience.

Changing Questioning Practices

We suggest three broad categories for changing the paradigm of questioning practices in clinical settings. First, questioning should be purposeful, meaning that the educator knows what he or she is hoping to accomplish with the question. Second, educators should attempt more faithful application of both historical and modern Socratic principles. Finally, exploration of various adult learning theories offers several concrete suggestions for making questions more useful to the adult learner.

Purposeful questioning

Purposeful questioning is the educator's deliberate consideration of the underlying goal of each question asked of the learner. In this practice, the educator deliberately examines all questions to determine to what degree they are knowledge centered, learner centered, assessment centered, or community centered.[9] Most questions will fall in more than one category, but the educator should be aware of each question's primary purpose. If the educator's answer to his or her reflection on "what is the purpose of this question?" is that it contains elements intended to cause discomfort in the learner, then the question must be reformulated if possible, or abandoned.

Knowledge-centered questions are centered on the facts, concepts, or skills they are reviewing. Many questions in the clinical setting probe the learner's knowledge base, and the goal of these questions is teaching or reviewing the material at hand. Learner-centered questions aid the learner in modulating his or her learning experience. One example of this is a series of progressively harder questions to encourage meta-cognition by helping a learner identify the contours of his or her knowledge base, including areas that need improvement. Another example is when questions assist a learner in identifying and correcting his or her misconceptions and preconceptions about the material. Questions that are assessment centered allow the educator to provide formative or summative feedback to the learner about his or her knowledge base or the application of that knowledge. Questions that are centered on the community of learners include those that assess the level at which learners grasp the information and then respond with further learning opportunities, either educator driven or learner driven. These opportunities may include offering brief didactic components, providing additional resources or materials to study, or assigning a small-group activity to prepare a presentation about content that is not well understood.

What would Socrates do?

What advice would Socrates offer to medical educators hoping to improve their use of questions? His questions and modern interpretations of his methods were meant to activate critical thinking skills.[17] In clinical environments, this is often encountered through questions that probe how learners apply their knowledge base to a particular clinical scenario to generate a diagnostic and therapeutic plan. These questions are typically interpretive because there is likely not one single correct answer. They may include requests for a differential diagnosis, the application of various tests and procedures to help confirm the diagnosis, and therapeutic options given evidence-based studies and patient preferences for care.

Although questioning of critical thinking skills can be directed at a single learner, a more faithful application of Socratic principles—learner collaboration, interpretive questioning, and reflecting—may result in deeper understanding of the issues at hand. For example, an interpretive question, either learner generated or generated by the educator, could be posed to the medical team. This would be followed by a discussion seeking to activate prior knowledge, identify and explore misconceptions learners may have about the case, and gain insight into the problem. Group reflection or debriefing about the dialogue that examines both the content and the process of the discussion would be important to make the thinking of members clear, to encourage learners to increase their meta-cognition while aiding the development of a safe and supportive learning community.

Applying adult learning theory

There is a multitude of adult learning theories that identify practices to improve educators' questioning techniques. First, situated cognition indicates that the learning environment itself is equally as important as knowledge and skills shared within it.[14] To enhance the environment, educators should clearly discuss the role that questioning has in teaching clinical knowledge as it relates to the needs of the individual learners, as a formative and summative assessment strategy, and in building community within the group of learners.[21] As noted earlier, learners must feel safe, respected, and supported, even when answering questions.[10,11] Forging a sound relationship with learners that identifies clear roles for educator and learners is key. Ideally, this relationship would be based on mutual respect and the understanding that learners can question and debate the educator.[21] Discussing the idea of praxis—that learning is a

continual process of reflection, action, and refinement—may aid in a discussion of roles and expectations of learners and educators alike.[10,21]

To improve individual questions, educators have several tools at their disposal. In general, educators should aim to construct queries that are challenging just beyond the learner's current ability.[22] Questions that either illuminate prior experience or help explicitly identify a learner's faulty assumptions or misconceptions can be transformative in taking learning to the next level.[23] Questions should be asked at the highest appropriate level in Bloom's taxonomy, moving as the learner does from lower-order thinking skills such as remembering, understanding, and applying to higher-order thinking skills such as analyzing, evaluating, and creating.[24]

Determining a learner's current level of self-direction can help the educator respond with appropriately challenging but not impossible questions.[25] Stage 1 *dependent* learners will require the educator to take on an expert role and use directive questions, whereas Stage 2 *interested* learners will benefit from an educator whose questions motivate them to identify their own learning goals. Stage 3 *involved* learners need questions that facilitate a discussion in which each member has an equal role, whereas Stage 4 truly *self-directed* learners require questions that help cultivate their ability to learn. This model highlights the journey that all physicians undertake from being dependent to becoming autonomous.[26]

Two theories of clinical competence can also offer ways to improve questioning. The first is a model that describes the path from "unconscious incompetence" to "conscious incompetence" to "conscious competence" to "unconscious competence."[27] Questioning strategies with this model in mind would assist a learner in moving from one level to the next. Initial questions would help a learner become aware of the need to improve a skill, whereas subsequent questions could assist in the competent development of that skill. Similarly, Miller's Pyramid of Clinical Competence suggests the type of questions appropriate for learners at each level of "knows," "knows how," "shows," and "does."[28] Questions for learners at the "knows" levels will be more directed to a fund of knowledge, whereas questions at the "knows how" level will assess the critical thinking skills of interpretation and application of that knowledge.

Conclusions

Medical educators traditionally teach through questioning. Questions designed to shame learners or reinforce the power hierarchy contribute to a culture of disrespect and should not be tolerated.[29] It is time to abandon the practice of pimping. Purposeful questioning that considers Socratic teaching methods and adult learning theories offers an alternative to pimping that removes its negative aspects and emphasizes improving learners' critical thinking during their medical education. Being called on to answer questions in a group may remain anxiety provoking for some, but the method of questioning should not be abusive.

Transforming the practice of pimping into a practice of questioning that considers purpose, Socratic principles, and adult learning theories will be an enormous undertaking, requiring structural and cultural change. As described in other disciplines, faculty development activities, buy-in from medical departments, and small, incremental behavior change strategies will be key.[30] Though changing questioning practices will be difficult, the potential dividends with respect to an improved environment that enhances community and learner success are so great that we cannot afford to delay adopting this new paradigm of questioning in medical education.

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Teaching and Learning Moments
Contact/Isolation

My son is in jail.
My daughter has been missing since trying to enter this country illegally.

I have no husband.
I live alone in a room.

But you already know this about me.
You've talked about it,
passed it along from one person to another,
as if it were your own story.

A month ago,
I threatened to jump out of a window
because I was sick
of living.

But you already know this, as well.
I can see it on your face,
and everyone else's,
as you gather around my bed,
staring at me.

My friend is here, next to me.
My only friend.
I'm too weak to talk,
but he can tell you more about me,
more about my life.

She's been very ill.
Sometimes she can't get up to go to the bathroom,
and when I come to visit her at home,
I find her sitting in her waste.

He'll tell you more about my children and how I used to bake for them on Sundays.

She can't bathe herself, either, and no one is there to help her.

He'll tell you about my sister and how I used to visit her by the coast every Christmas.

She once told me she wishes to be cremated.

There's more, though, so much more to me.
But not in this place,
not here.

I'm a clump of flesh,
peeling skin and yellow eyes.

People see me,
gather around me,
write notes on me,
share stories about me.

And yet I am invisible,
vanishing before your eyes.

I wrote this poem about a patient I cared for on several occasions during my intern year. She was in her 40s and was diagnosed with cryptogenic cirrhosis. She was denied a liver transplant—a potentially curative intervention—because of her status as an undocumented immigrant. As a result, her irreversible illness advanced over several years, ultimately to end-stage liver disease.

I wrote this poem shortly after she died. I was increasingly troubled by the way that some of her professional caregivers discussed her illness. Often when her name appeared on a patient census, the response was, "Oh, she's back again," or "Wasn't she just here?" They began to see her more as just a chronic inpatient and less as a human being with a unique identity.

What disturbed me most were the conversations I overheard regarding the private details of her life. Although the social elements of a patient's history should be shared during staff rounds, handoffs, or reports, this information deserves to be discussed thoughtfully. One can easily cross the line from a comprehensive summary of a patient's history to a perverse indulgence in gossip.

This patient had a son in jail, a missing daughter, and a history of attempted suicide, all in addition to her terminal disease. The more we took care of her in the hospital, the more her story was stolen, beaten down, and reduced to idle chatter. In essence, the more we came into contact with her, the more we isolated her from being a unique and meaningful person. Despite seeing her every day, we made her invisible, all the while priding ourselves on being eager and attentive health care professionals.

One simple question I ask myself when caring for a patient is, "Who is she outside this hospital?" With this patient, she was a woman whose struggles extended far beyond her chronic illness. She was someone who came to this country with the desperate hope of improving her family's life, only to realize that social injustice would follow her here. She suffered alone, with a son left behind in prison, and no knowledge of where her daughter was, well aware that, despite her terminal disease, she may have outlived both of her children. That was her story, and it deserved to be handled as delicately and thoughtfully as her medical needs. Remembering this experience, I try to see my patients as more than just a name or a concept; I try to be an advocate for their unique and sacred individuality. I would expect no less from my own caregivers.

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