Module 2--The Socratic Questioning Method

The Socratic Questioning Method is a questioning model which focuses on giving students questions, not answers. It leads students to self-understanding of content and encourages higher level thinking skills. By following all answers with further questions, and by selecting questions which advance the discussion, the Socratic questioner forces the student to think in a disciplined, intellectually responsible manner.

The **focus** of a Socratic questioner is to delve further into these elements, each of which represents a dimension of understanding:

(1) We can question goals and purposes.
(2) We can probe into the nature of the question, problem, or issue at hand.
(3) We can inquire whether or not we have relevant data.
(4) We can consider alternative interpretations of the data and information.
(5) We can analyze key concepts and ideas.
(6) We can question assumptions being made,
(7) We can ask students to trace implications and consequences of what they are saying.
(8) We can consider alternative points of view.

A Socratic questioner should:

(1) keep the discussion focused
(2) keep the discussion intellectually responsible
(3) stimulate the discussion with probing questions
(4) periodically summarize what has been and what has not been dealt with and/or resolved
(5) draw as many students as possible into the discussion.

Socratic questions fall into **six major categories**:

I. **Probing Questions—**A series of questions which require students to go beyond the first response; subsequent questions are formed on the basis of the student's response.

A. **Clarifying**
What made you think of that?
What, exactly, do you mean by that?
Will you please rephrase your statement?
Could you elaborate on that point?
What did you mean by the term….?

B. Increasing Critical Awareness
Where do you think we should start?
What are you assuming?
What are your reasons for thinking that?
Is that all there is to it?
How would an opponent of this point of view respond?

C. **Refocusing**
What will happen if what you said is true?
If this is true, what are the implications for ……?
How does John's answer relate to ……?
Can you relate this to ……..?
Let's analyze that answer.

D. Prompting
Teacher: John, what's the square root of 94?
John: I don't know.
Teacher: Well, what's the square root of 100?
John: I know that one—it's ten.
Teacher: And what's the square root of 81?
John: That answer is nine.
Teacher: Then what can you say about the square root of 94?
John: It has to be between nine and ten.

E. Redirecting to Another Student
Teacher: What is the theme of Hemmingway's "Old Man and the Sea"?
Sam: It's about an old man's courage in catching a fish,
Teacher: Mary, do you agree?
Or: Mary, do you think it's that simple?
Or: Mary, can you elaborate on Sam's answer?

II. **Factual Questions**—Questions which require the student to recall specific information he/she has previously learned; often these questions begin with "who, what, when, where, how".

A. Simple Bits of Information
What is the definition of …..?
Who is the main character in "Gone with the Wind"?
During which century did Shakespeare live?
What is the Spanish verb meaning "to run"?
Where did the French Revolution start?

B. Facts Organized into a Logical Order/Sequence of Events
What are the steps a bill goes through before it becomes law?
How did Robinson Crusoe react when he discovered footprints in the sand?
What is the commercial method for producing hydrochloric acid?

III. **Divergent Questions**—Questions with no wrong or right answers, but which encourage exploration of possibilities; requires both concrete and abstract thinking to arrive at an appropriate response.

What is the opposite of this position?
What might happen if Congress passes a law preventing the manufacture and sale of cigarettes in the United States?

How would the story have been different if John had been a tall, strong boy instead of disabled?
If you were stuck on a desert island and the only tool you had was a screwdriver, what use might you make of it?
In what ways would history have been changed had the Spanish Armada defeated the English in 1588?

IV. **Higher Order Questions**—Questions which require students to figure out answers rather than remember them; requires generalizations related to facts in meaningful patterns.

A. **Evaluation**—requires judgment, value, or choice based upon comparing of ideas or objects to established standards

Which of the two books do you believe contributed most to an understanding of the Victorian era? Why?
Assuming equal resources, whom would you rate as the most skillful general, Robert E. Lee or Ulysses S. Grant? Why?

B. **Inference**—requires inductive or deductive reasoning
Inductive: discovery of a general principle from specific facts; moving from the specific to the general

After examining the qualities these world leaders have in common, what might we conclude about the qualities necessary for leadership? Why?

Deductive: use of a generalization to examine or test specific facts; moving from the general to the specific

If the temperature of the gas remains the same, but gas is taken to an altitude of 4000 feet higher, what happens to the pressure of the gas? Why?

C. **Comparison**—requires student to determine if ideas/objects are similar, dissimilar, unrelated, or contradictory

Is a mussel the same thing as a clam?
What similarities and differences exist between Lincoln's Gettysburg Address and Pericles' Funeral Oration?
What is the connection between Social Darwinism and the Supreme Court actions of the late nineteenth century?

D. **Application**—requires student to use a concept or principle in a context different from that in which he/she learned it.

You're correct. The answer to this question is false. What would be needed to make it true?
Concept—Classification of events/objects that have common characteristics
Principle—A relationship between two or more concepts

Ex: How was Gresham's Law demonstrated in the Weimer Republic of Germany?
Can you think of an example to fit this definition?

E. **Problem-Solving**—requires a student to use previously learned knowledge to solve a problem; students must see relationships between knowledge and the problem, diagnose materials, situations, and environments, separate problems into component parts, and relate parts to one another and the whole. This type of question may generate answers the teacher had not anticipated!

Suppose you grew up with the idea that dogs were bad. Out of the many dogs you came in contact with, none bit you when you were quite young. How would you react toward dogs now? Would the size, type, etc. of the dog make any difference as to how you react? Explain the notion of prejudices using this example.

V. **Affective Questions**—Questions which elicit expressions of attitude, values, or feelings of the student.

How do you feel about that?
Is that important to you?
What is your opinion?
Would you like to…..?

VI. **Structuring Questions**—Questions related to the setting in which learning is occurring.

Are there any questions?
Any further comments?
Is the assignment clear?
Would you repeat that?
Are we ready to continue?

Bloom's Taxonomy

Another type of Socratic Questioning follows **Bloom's Taxonomy**. This taxonomy follows six levels of questions, from Knowledge (lowest level) to Evaluation (highest level). The Question Cues for each level are helpful for asking questions which can be used to assess a student's understanding of concepts. Please refer to the attached information regarding Bloom's Taxonomy

Sample Questions Using Bloom's Taxonomy

Knowledge

What is the definition of ……..?
Can you identify the main character in Gone with the Wind?
What is the Spanish verb meaning "to run"?
Where and when did the French Revolution start?
Can you list the steps a bill goes through before it becomes law?
How would you start this problem?

Comprehension

What made you think of that?
Could you elaborate on that point?
What are your reasons for thinking that?
How would you compare these two problems?
Can you summarize the last paragraph?
How does John's answer relate to…….?

Application

How does what we learned last week apply to this problem?
What assumptions can you make?
What can you infer from that statement?
What conclusions can you draw?
Can you predict what might happen if ……..?

Analysis

What similarities do you see in these kinds of problems?
How do these two problems, stories, essays,…… differ?
What is the opposite of this position?
Analyze what might happen if Congress passed a law preventing the manufacture and sale of cigarettes in the United States.
If you were stuck on a desert island and the only tool you had was a screwdriver, what use might you make of it?

Synthesis

In what ways would history have been changed if the Spanish Armada had defeated the English in 1588?

Explain what would happen if you reversed those operations?
If this and this are true, then what else must be true?
If that happened, what else would happen as a result?
Based on the facts you have, what hypothesis can you draw?
What if you reverse the steps in this procedure?

Evaluation

What conclusions can you determine?

What is your supporting evidence for your answer?
Defend your position on that issue.
How can you verify your answer?
What is the justification for your response?
Can you explain the reasons for your opinion?
How would you evaluate the effectiveness of receiving tutoring?

The Wrong Questions Won't Provide the Right Answer!

Asking questions of your students gets them to participate in the pursuit of knowledge, but the wrong approach can hamper this. Try to avoid these common mistakes:

1. **Avoid asking complex questions**—"Who knows the cause of the War of 1812 and how the British government reacted to it?" Instead, ask one question at a time, as simply as you can.

2. **Avoid asking railroading questions to get the answer you want**—"Who knows a cause for the War of 1812, that was an economic one, which had to do with personal pride?" Try to get the students to consider factors themselves.

3. **Avoid asking "yes" or "no" questions**—"Did the British win the War of 1812?" This limits the participation of the student to a 50/50 chance of being right, without requiring much thought or understanding.

4. **Avoid calling on the first person who raises his/her hand**—instead, wait a few seconds to give everyone a chance to assimilate information and answer. Also, one person may be doing all the answering, thus relieving others of any responsibility for learning.

5. **Avoid repeating every comment, answer, or question a student has**—Students will get in the habit of waiting for you to give the answer, making you, and not the student, the official answer giver. Further, students will not learn to listen if they know everything will be repeated.

6. **Avoid asking the same type of question all the time**—Mix up the demands of your questioning from factual to opinion to summarizing; this will test students' varying levels of understanding.

7. **Avoid immediately saying if an answer is correct**—Make sure the student is confident of his/her answer, and not just guessing. This also allows for further questioning on deeper levels.

How to Handle Wrong Answers

1. Correct your student's work without being discouraging.
2. Don't say "no" or "that's wrong"; never make fun of answers.
3. Always try to get a right answer before going on to the next problem.
4. If the student's answer is incomplete, help the student with the question and the answer.
5. If the answer is incorrect, give clues to help discover the answer.
6. Once the student has discovered the right answer, repeat the question, have the student repeat the right answer, and provide praise.
7. Be sure the student understands what the error was and give another opportunity later to repeat the question and answer so that the correct answer is reinforced.
8. If the student consistently gets the wrong answer, review different ways you might involve the student and try another approach until you find one that provides success for the student.
9. Reword the question.
10. Break the original question into smaller parts.
11. Change the inflection in your voice when repeating the original question.
12. Allow some wait time; often a student will self-correct an answer.

How to Handle Right Answers

1. Give praise and rewards at the right time.
2. A right answer must be complete and correct.
3. Praise your student after every correct answer.
4. When the students give the right answer the first time, without any help, give special recognition.
5. If your student fishes for answers, get a commitment before you respond.
6. Let the student know it is all right to try even if unsure of the answer.

If your student doesn't answer, try these things:

1. Calmly ask the question again, give a hint, and ask another question that might elicit the same answer, be encouraging!
2. Sound pleased when you get an answer, and praise the student if it's right.
3. Don't make an issue of the resistance to answer.
4. Have the student *think out loud* rather than saying nothing.
5. Be patient. Some people need "think" time before they respond.
6. Try asking, "What do you understand?" instead of "What don't you understand?" If students knew what they didn't comprehend, they wouldn't be lost. They can form coherent questions only if they understand the whole lesson. The student gets a positive start on the problem by telling you what he or she knows; then the tutor can sort out the areas that have caused the student not to understand.

Use Encouragement

You, as the tutor, have the opportunity to praise the work of your students and give them recognition for a job well done. You, as the tutor, have the opportunity to help students build self-confidence, self-esteem, and independence as learners. You, as the tutor, have the opportunity to help students realize their individual potential and become successful participants in their education, even so in life.

When providing recognition, encouragement, and motivation for students, try a variety of praise phrases. (Not all at one time, however; choose difference exclamations to fit the situation.) "Good" and "OK" work well, but tend to become monotonous and meaningless with repetition. Try these examples:

- "Nice job."
- "You worked so hard on that problem/paper/project."
- "You have come so far."
- "Keep up the nice work."
- "Great!
- Fantastic!
- Wonderful!
- Magnificent!
- Terrific!
- Fabulous!
- Super!
- Stupendous!"
- "Way to go!" "WOW!"
- "I appreciate your efforts."
- "You have made such nice progress."
- "All right!"

Remember, one of your goals as a tutor is to help students arrive at independence in their learning and understanding, thus tutoring yourself out of a job.

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Evaluation

Module Two—Questioning Techniques

1. How would you define the Socratic Questioning Method?

2. What are two kinds of Probing questions? Give an example for each.

3. Give an example of a Divergent question.

4. Using Bloom's Taxonomy, give an example of a question for each of the following levels:
    - Application
    - Analysis
    - Synthesis

5. Using Bloom's Taxonomy, what are three question cues that would check a student's understanding on the Evaluation level?

6. What are two common mistakes in asking questions? How could you avoid each of these mistakes?

7. What is one strategy you could try if a student does not answer a question?

8. List three encouraging words you could use to praise your student.