**Socratic Teaching**

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| The oldest, and still the most powerful, teaching tactic for fostering critical thinking is Socratic teaching. In Socratic teaching we focus on giving students questions, not answers. We model an inquiring, probing mind by continually probing into the subject with questions. Fortunately, the abilities we gain by focusing on the elements of reasoning in a disciplined and self-assessing way, and the logical relationships that result from such disciplined thought, prepare us for Socratic questioning. Thankfully, there is a predictable set of relationships that hold for all subjects and disciplines. This is given in the general logic of reasoning, since every subject has been developed by those who had: * shared goals and objectives (which defined the subject focus)
* shared questions and problems (whose solution they pursued)
* shared information and data (which they used as an empirical basis)
* shared modes of interpreting or judging that information
* shared specialized concepts and ideas (which they used to help them organize their data)
* shared key assumptions (that gave them a basis from which to collectively begin)
* a shared point of view (which enabled them to pursue common goals from a common framework)

Each of the elements represents a dimension into which one can delve in questioning a person. We can question goals and purposes. We can probe into the nature of the question, problem, or issue that is on the floor. We can inquire into whether or not we have relevant data and information. We can consider alternative interpretations of the data and information. We can analyze key concepts and ideas. We can question assumptions being made. We can ask students to trace out the implications and consequences of what they are saying. We can consider alternative points of view. All of these, and more, are the proper focus of the Socratic questioner.As a tactic and approach, Socratic questioning is a highly disciplined process. The Socratic questioner acts as the logical equivalent of the inner critical voice which the mind develops when it develops critical thinking abilities. The contributions from the members of the class are like so many thoughts in the mind. All of the thoughts must be dealt with and they must be dealt with carefully and fairly. By following up all answers with further questions, and by selecting questions which advance the discussion, the Socratic questioner forces the class to think in a disciplined, intellectually responsible manner, while yet continually aiding the students by posing facilitating questions.A Socratic questioner should: **a)** keep the discussion focused**b)** keep the discussion intellectually responsible**c)** stimulate the discussion with probing questions**d)** periodically summarize what has and what has not been dealt with and/or resolved**e)** draw as many students as possible into the discussion. |

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| Paul, R. and Elder, L. (April 1997). Foundation For Critical Thinking,

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| **1. Questions for clarification:** | * Why do you say that?
* How does this relate to our discussion?
* "Are you going to include diffusion in your mole balance equations?"
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| **2. Questions that probe assumptions:** | * What could we assume instead?
* How can you verify or disapprove that assumption?
* "Why are neglecting radial diffusion and including only axial diffusion?"
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| **3. Questions that probe reasons and evidence:** | * What would be an example?
* What is....analogous to?
* What do you think causes to happen...? Why:?
* "Do you think that diffusion is responsible for the lower conversion?"
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| **4. Questions about Viewpoints and Perspectives:** | * What would be an alternative?
* What is another way to look at it?
* Would you explain why it is necessary or beneficial, and who benefits?
* Why is the best?
* What are the strengths and weaknesses of...?
* How are...and ...similar?
* What is a counterargument for...?
* "With all the bends in the pipe, from an industrial/practical standpoint, do you think diffusion will affect the conversion?"
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| **5. Questions that probe implications and consequences:** | * What generalizations can you make?
* What are the consequences of that assumption?
* What are you implying?
* How does...affect...?
* How does...tie in with what we learned before?
* "How would our results be affected if neglected diffusion?"
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| **6. Questions about the question:** | * What was the point of this question?
* Why do you think I asked this question?
* What does...mean?
* How does...apply to everyday life?
* "Why do you think diffusion is important?"
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* The Socratic Method is not about proving people wrong, but challenging assumptions. If your goal is to argue effectively, Socrates may offer some advice, but this method is best used for challenging even your own beliefs.
* The key to using the Socratic method is to [be humble](http://www.wikihow.com/Be-Humble). Don't assume that you or anyone knows anything for sure. Question every premise.
* Remember that the goal with the Socratic method is to examine possibilities, and that is done by asking questions, not by giving answers. Socrates was known (and criticized) for asking questions to which he didn't have answers.[[1]](http://www.wikihow.com/Argue-Using-the-Socratic-Method#_note-1)

**Warnings**

* Socrates, the inventor of this method, was forced to take hemlock because he annoyed too many people. While it's unlikely that excessive use of the Socratic method will lead you to the same fate, it's quite possible that no one will want to speak to you if you make a habit of tearing apart any declarative statement that falls on your ears. Debate in a friendly fashion and try not to embarrass or annoy your opponent.
* Plato argued that Socrates did not know the answer and yet from the writings of Plato (which is the only way we know of Socrates) one can presume he often asked questions he had answers for. Professors of Business & Law have been known to use this technique of rhetorical questioning in their teaching, as has a Christian religious figure - Jesus of Nazareth