

The Question Formulation Technique (QFT)

I. QFT Encourages Three Types of Thinking

- A. Divergent thinking is a distinct form of higher-order thinking that can be taught to all ages and all students.
- B. Convergent thinking involves the synthesizing of a range of ideas, allowing students to take a collection of facts and examples and make sense of it all.
- C. Students who are aware of themselves as learners (metacognition) and who can name and monitor their own learning strategies can more easily apply knowledge obtained in one context to another.

II. The first step in the QFT is developing and choosing the Question Focus, or QFocus.

- A. Out goes the term prompt, and in its place, we use Question Focus, or QFocus.
- B. The name is meant as a reminder: to you, that your role is to provide a focus for student questions; and to students, as a notice that your QFocus is not a question for them to answer but, rather, a focus for questions that they will create.

III. In the second step, four Rules for Producing Questions offer a rigorous structure— a protocol— within which students can produce their own questions.

- A. The rules set up the process for students to work on their own without assistance from the teacher:
 1. Ask as many questions as you can.
 2. Do not stop to discuss, judge, or answer any of the questions.
 3. Write down every question exactly as it was stated.
 4. Change any statements into questions.

IV. The teacher presents the QFocus to the students and gives them a set amount of time to follow the Rules for Producing Questions and come up with their own questions.

V. Students Improve the Questions: Closed- and Open-Ended Questions

A. Provide a definition for closed and open-ended questions:

1. A closed-ended question is answered with a one-word response such as yes or no or another single word. Example: Is this going to be on the test?
2. An open-ended question requires more explanation. Example: What will be on the test? These definitions provide students with clear criteria that help them begin to differentiate between a bunch of questions that seem to run together. It is useful to post a chart, as shown in figure 5.1, with the definition and advantages and disadvantages for easy review.

B. Instruct students to review the list of questions they produced and mark closed-ended questions with a “C” and open-ended with an “O.” Two to three minutes will be enough time to complete this task.

C. Facilitate a discussion on the advantages and disadvantages of closed- and open ended questions. You will need about four minutes for this discussion, depending on what strategy you use. Students can discuss advantages and disadvantages in small groups that will report their conclusions, or as a large group.

D. Instruct students to change questions from one type to another. You decide on the number of questions they change. Changing one or two questions is enough for practice. It will take about three minutes to complete this task. The following case study illustrates the process.

VI. Students prioritize by choosing three questions from their list; choices are based on criteria you have established, for example:

A. Choose the three most important questions.

B. Choose the three questions that most interest you.

- C. Choose the three questions that will best help you design your research project.

VII. Beginning of Unit/Class (Sample Uses of Student Questions)

- A. In a do-now activity, students ask questions relevant to previous day's work or upcoming work or any topic to inform class discussion.
- B. Students generate questions to use as guides for reading or thinking about a new assignment, subject, or topic before being formally introduced to it.
- C. Students use questions to identify specific topics for research papers, essays, experiments, and projects.
- D. Teacher uses student questions to assess prior knowledge and identify gaps in information and understanding.
- E. Teacher uses student questions to shape or refine lesson plans for the next day or entire unit.
- F. Student questions guide Socratic seminar content.
- G. Teacher posts student questions for them to see as unit progresses.

VIII. Mid-unit or Middle of Class (Sample Uses of Student Questions)

- A. Students generate questions to shape their own homework assignments
- B. Questions provide examples for teachers to review in prep for next stage of unit.
- C. Students use questions to prepare for tests.
- D. Questions help teacher assess what kinds of issues students are addressing and what they are not and what students are and are not understanding or learning.
- E. Teacher references student questions from beginning of unit to show how they are being answered through student work.
- F. Questions can guide moot court exercises in which students in the role of judges prepare questions to ask of lawyers and students as lawyers try to predict questions they will hear from opposing counsel and judge.
- G. Students prepare questions for job exploration.

IX. End of Unit/ Class

- A. In a do-now activity at end of class, students ask questions relevant to the class just concluded or next day's work or upcoming work or any topic.
- B. Student questions help them prepare final reports, PowerPoint presentations, and write papers.
- C. Students use questions to prepare for interviewing outside experts.
- D. Questions aid in final assessment and review of student learning.
- E. Students and teacher set new research agenda for the next unit.
- F. Teacher references student questions from beginning of unit to show how they have been answered through student work and works with students to identify questions that still need answer.

Rothstein, Dan; Santana, Luz (2011-09-01). *Make Just One Change: Teach Students to Ask Their Own Questions* Harvard Education Press. Kindle Edition.