

QUESSIE Newsletter February 2018

Dear **QUESSIE** Member

When students know how to ask their own questions, they take greater ownership of their learning, deepen comprehension, and make new connections and discoveries on their own. However, this skill is rarely, if ever, deliberately taught to students from kindergarten through high school. Typically, questions are seen as the province of teachers, who spend years figuring out how to craft questions and fine-tune them to stimulate students' curiosity or engage them more effectively. Teaching students to ask their own questions can accomplish these same goals while teaching a critical lifelong skill.

The Question Formulation Technique (QFT)

This technique helps students learn how to produce their own questions, improve them, and strategize on how to use them.

Teachers can use the QFT at different points: to introduce students to a new unit, to assess students' knowledge to see what they need to understand better, and even to conclude a unit to see how students can, with new knowledge, set a fresh learning agenda for themselves. The technique can be used for all ages.

Students have used the QFT to develop science experiments, create their own research projects, begin research on a teacher-assigned topic, prepare to write an essay, analyze a word problem, think more deeply about a challenging reading assignment, prepare an interview, or simply get themselves "unstuck."

The QFT has six key steps:

Step 1: Teachers Design a Question Focus. The Question Focus, or QFocus, is a prompt that can be presented in the form of a statement or a visual or aural aid to focus and attract student attention and quickly stimulate the formation of questions. The QFocus is different from many traditional prompts because it is not a teacher's question. It serves, instead, as the focus for student questions so students can, on their own, identify and explore a wide range of themes and ideas.

Step 2: Students Produce Questions. Students use a set of rules that provide a clear protocol for producing questions, without assistance from the teacher. The four rules are: ask as many questions as you can; do not stop to discuss, judge, or answer any of the questions; write down every question exactly as it was stated; and change any statements into questions. Before students start generating their questions, the teacher introduces the rules and asks the students to think about and discuss possible challenges in following them. Once the students get to work, the rules provide a firm structure for an open-ended thinking process. Students are able to generate questions and think more broadly than they would have if they had not been guided by the rules.

Step 3: Students Improve Their Questions. Students then improve their questions by analyzing the differences between open- and closed-ended questions and by practising changing one type to the other. The teacher begins this step by introducing definitions of closed- and open-ended questions. The

students use the definitions to categorize the list of questions they have just produced into one of the two categories. Then, the teacher leads them through a discussion of the advantages and disadvantages of both kinds of questions. To conclude this step, the teacher asks the students to change at least one open-ended question into a closed-ended one, and vice versa, which leads students to think about how the phrasing of a question can affect the depth, quality, and value of the information they will obtain.

Step 4: Students Prioritize Their Questions. The teacher, with the lesson plan in mind, offers criteria or guidelines for the selection of priority questions. In an introduction to a unit, the instruction may be, “Choose the three questions you most want to explore further.” When designing a science experiment, it may be, “Choose three testable questions.” An essay related to a work of fiction may require that students select “three questions related to the key themes we’ve identified in this piece.” During this phase, students move from thinking divergently to thinking convergently, zero in on the locus of their inquiry, and plan concrete action steps for getting information they need to complete the lesson or task.

Step 5: Students and Teachers Decide on Next Steps. At this stage, students and teachers work together to decide how to use the questions.

Step 6: Students Reflect on What They Have Learned. The teacher reviews the steps and provides students with an opportunity to review what they have learned by producing, improving, and prioritizing their questions. Making the QFT completely transparent helps students see what they have done and how it contributed to their thinking and learning. They can internalize the process and then apply it in many other settings.

When teachers deploy the QFT in their classes, they notice three important changes in classroom culture and practices. Using the QFT consistently increases participation in group and peer learning processes, improves classroom management, and enhances efforts to address inequities in education. As teachers see this happen again and again, they realize that their traditional practice of welcoming questions is not the same as deliberately teaching the skill of question formulation. Or, as one teacher put it: “I would often ask my students, ‘Do you have any questions,’ but, of course, I didn’t get much back from them.”

The QFT provides a deliberate way to help students cultivate a skill that is fundamentally important for all learning. Teaching this skill in every classroom can help successful students to go deeper in their thinking and encourage struggling students to develop a new thirst for learning. Their questions will have much to teach us.

Thank you to Dan Rothstein and Luz Santana for this enlightening article.

Best wishes



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