

The Art and Science of the QFT: Tailoring the QFT for Your Learners

We often say that The Question Formulation Technique (QFT) is both a science and an art.



A rigorous protocol, with specific steps and sequence, that produces consistent results



The artistry that each facilitator brings to the process

The QFT is a flexible tool that is meant to be tailored to work for many different ages, subjects, purposes, and settings. Effective tailoring is intentional, faithful to the core principles of the QFT, and strategic about the advantages and disadvantages of condensing or changing particular steps to best meet the objectives.

Core of the QFT:

- Students ask the questions
- The facilitator allows as much space as possible for students to ask and work with their questions
- Students move through divergent thinking to convergent thinking, (rather than skipping straight to convergent thinking or stopping cold at divergent thinking)
- Students have opportunities for metacognition

While the QFocus (the prompt or stimulus for student questions) is the primary customizable piece that helps to ensure that student questions are more or less aligned with the content and objectives, there are three additional pieces of the QFT that you may opt to tailor: categorization instructions, prioritization instructions, and reflection questions.

3 parts of the QFT to consider tailoring:

1. Categorization Instructions
2. Prioritization Instructions
3. Reflection Questions

1. Categorization Instructions

The standard instructions for categorization are to label closed- and open-ended questions and then transform one open-ended question to closed and one closed-ended question to open.

Close-ended questions: Questions that can be answered “yes,” “no” or with a one-word answer.

Open-ended questions: Questions that require additional explanation, beyond yes, no, or one word.

The closed and open categories (and the definitions of each) are designed to be intentionally simple; this is another way the QFT lowers the barriers to asking and working with one’s own

questions. The intention behind this step is not as much about the categories themselves and getting every question exactly perfectly labelled, but rather about the *language* of questions. Students learn to recognize how phrasing may determine the information or answer they are likely to receive. They learn to be strategic and intellectually flexible by changing one type of question to another. In life, we often need to move quickly to rephrase questions or pose follow up questions. Students also learn the value of revision and iteration; every question has value, no matter how you phrased it initially, because it leads to other questions and can be reworked depending on what you need. Having only two categories of questions to find and label enables students to really focus on building the underlying skills.

That said, there are sometimes instructional reasons to tailor the categorization and ask students to label additional or alternative question categories. Try to keep any additional categories relatively simple with concrete, shared criteria. As English teacher Ellen Gammel found (below), students were defining “questions that would be difficult to answer or may not have an answer” as questions that would be difficult for *them personally* to answer, rather than as questions that even a google search, textbook, author, or teacher would struggle to answer.

Examples of Categorization Tailoring

-The [Right Question Institute's Voice in Decisions Technique](#) asks participants to label questions about Reasons, Process, Role in a decision. Note that the QFocus has to contain a decision.

-To help students identify key criteria for geo-inquiry questions (part of National Geographic's geo-inquiry framework) you might ask them to label A = questions related to taking action or making a change and L= questions related to a specific location or place.

-[English teacher Ellen Gammel](#) had students categorize by several categories including: “questions we could answer easily” and “questions that would be difficult to answer or may not have an answer.”

-[Science teacher Nicole Bolduc](#) had students label questions that contained scientific vocabulary and questions that included a scientific pattern that they had previously learned.

-[Some early elementary teachers](#) have students generate categories or patterns they see emerging from the list of questions; these categories then become the “priority questions.”

2. Prioritization Instructions

Whereas the point of the QFocus is to invite and stimulate **divergent thinking** (creative, generative thinking in many different directions), the categorization and especially prioritization instructions move students into **convergent thinking** (analytical thinking that narrows down).

The standard prioritization instructions are to “select the 3 questions that you find most important.” Note that the instructions are not “select *the* 3 most important questions,” which suggest that there are 3 correct, objectively important questions to select.

You might opt to tailor the prioritization instructions to a more specific purpose, however, if you want students to narrow down even more. You could even do two rounds of prioritization, if there are two different types of questions or sets of criteria you'd like students to consider.

Example Prioritization Instructions

“Choose the three questions that...

- ...you're most curious about.
- ...you would be most interested to investigate.
- ...we could research.
- ...We could test or answer with math.
- ...are not “googleable” or that Siri could not answer.
- ...you feel are best to begin a class discussion.
- ...are most “outside of the box.”
- ...are actionable.
- ...are geographic and actionable.
- ...are best for helping us learn about [topic].
- ...you think we should answer first.
- ...you think a scientist studying the earth would ask.

It is important that students have clear, concrete criteria for identifying types of questions by their use or application. Students may not understand what a “researchable” question is, for instance, and indeed, different people might define “researchable” quite differently. Conversely, students can identify what they are curious about without explicit pre-teaching or work on a shared definition. Avoid using descriptors like, good, best, strong, sophisticated, etc; these often feel vague and subjective to students and can become an obstacle to asking any questions at all.

While you generally plan prioritization instructions ahead of time, you can also make a change “on the fly” to troubleshoot a QFocus that has gone unexpectedly astray. For example, one high school history teacher noticed that her class had asked questions primarily about Maya Angelou, the speaker the QFocus quotation was attributed to, rather than the quotation itself: *“History, despite its wrenching pain, cannot be unlived; but if faced with courage, need not be lived again.”* A quick change to the prioritization instructions ensured students selected questions about the study of history (the objective), rather than the speaker and her biography. What prioritization instructions do you think may have helped?

3. Reflection Questions

Because reflection is the last step of the QFT, it can be easy to run out of time for it, but it is an absolutely critical step. As John Dewey famously wrote, “we do not learn from experience...we learn from reflecting on experience.” For students to be able to absorb, replicate, and transfer questioning skills to other areas, they have to understand *how* they create questions and how their own thinking works.

Teachers report that sometimes the quietest students in the room, who may not even ask a question themselves the first time, are often the ones who submit the most profound reflections.



Reflection questions can be more general or more specific, focused on process or content, and condensed (a quick exit ticket or chat box comment) or drawn out (a full class discussion or a written self-reflection). Ideally, students will have a few opportunities to reflect on their thinking (metacognition) throughout the process, not just at the end.

Example Reflection Questions

What did you learn?

How did you learn it?

How are you thinking differently now about [topic]?

How did you feel about asking questions?

How can you use what you learned about [topic]?

How can you use what you learned about questions?

What have you noticed about questioning since we last used the QFT?

How has your questioning changed since we last used the QFT?

What did you notice about the sequence of your list of questions and where your priority questions were in that sequence?

What new questions do you have now about [topic]?

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