

Q Tasks

*How to empower students to ask questions
and care about answers*

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Introduction

You understand it only if you can teach it, use it, prove it, explain it, or read between the lines.

(Wiggins and McTighe, *Understanding by Design*)

What an important task we have...to create learning that compels our students past twilight, imbued with a feeling of investigating something enormous!
(Debbie Abilock, *Knowledge Quest*)

This imaginative definition of the important work of educators eloquently expresses what we hope readers will feel as they explore this book.

Teaching and learning are so exciting, but ever so complex. For this reason alone we will attempt to keep it simple. We all want our students to be successful. We can measure success with a sigh of satisfaction when we realize, *They got it, they understand*. Having said that, we all know that there is nothing simple about the ability of the human mind to acquire and demonstrate understanding of skills, knowledge, and ideas. Fortunately there are many scholarly studies and resources available to assist us in working out our own personal understanding of what student understanding looks, sounds, and feels like. Individual teachers will build and rebuild their own schema over and over as their experiences build and new challenges unfold.

The more we understand the brain the better we'll be able to design instruction to match how it learns best ... certain activities and strategies are more effective than others in increasing student understanding. (Patricia Wolfe, *Brain Matters*)

One point all the academic experts would agree on is that understanding is a process, not a destination point. With this in mind, we suggest that the most critical key to understanding is the question. Without an inquiry catalyst, student learning would be forever stuck in memorization-and-recall gear. It is the question that stirs the intellect, wakes up the neurons, and provides the stimulus for students to do something with the raw numbers, facts, and data they have gathered or been presented with. The question can be prompted by both the curiosity of the student and the instructional intent of the educator. Both these sources of questions are necessary if students are to learn and ultimately reach real understanding of topics and issues.

The Question Is the Answer to Understanding

Questioning is often thought to be an innate skill, right up there with eating and walking. If you think about it, though, eating and walking are nurtured skills. So it is with questioning.

In spite of the fact that our wee kindergarten students arrive at school bursting with “why?” and “how come?” questions, by the time they are in middle school many have lost this delightful and valuable curiosity. They are so used to answering teacher questions, worrying about marks, and giving the “right” or expected answer that they are stuck in answer gear. How can understanding ever be achieved in this atmosphere? It is not surprising that some students in the middle years become very jaded about school and feel it has no relevance for them. They are tired of answering “fake” questions, those generated by the need to cover curriculum content.

We are not saying that teachers should not develop questions for students to answer. These questions are a necessary component of teaching students how and when to question. What we are saying is this: just try letting go; put the spoon in a student’s hand and see what happens. It is not so difficult to turn the tables and teach students how to develop real questions, those that uncover personal understanding for them. Allowing students the exhilaration of learning in an environment where their questions are valued and celebrated will reap rich rewards. When students have some ownership of their learning experience, you will find that enthusiasm, effort, and efficacy will be generated.

Motivation is part of our rationale for teaching students to question. Our main objective is the chemistry that takes place between questions and understanding. The number one reason that many research projects in classrooms are ho-hum bristol board displays or plagiarized reports is because they are driven by the “all about” syndrome. But this is very easy to fix! If you really want your students to demonstrate their personal growth and understanding through assigned research projects, then they must process the data they have gathered through the lens of a good inquiry question or challenge.

Once you have learned how to ask relevant and appropriate questions, you have learned how to learn and no one can keep you from learning whatever you want or need to know.

(Neil Postman and Charles Weingartner,
Teaching as a Subversive Activity)

“The mere formulation of a problem is far more essential than its solution, which may be merely a matter of mathematical or experimental skills. To raise new questions, new possibilities, to regard old problems from a new angle requires creative imagination and marks real advances in science.”
Albert Einstein

Students cannot be expected to think critically and creatively about the ideas and knowledge of others unless they possess that magical chemical ingredient—the question—to kickstart the process. The question can take the form of an inquiry question or statement. It can be a challenge, problem to solve, or decision to make; but it must be there or the assignment becomes an exercise in pretend research. We all know the result—cut, paste, and plagiarize!

The information available to students today renders it impossible to approach learning without questioning skills. The vast volumes of data available today on any given topic can be managed and analyzed only by people

“At first, I see pictures of a story in my mind. Then creating the story comes from asking questions of myself. I guess you might call it the ‘what if—what then’ approach to writing and illustration.”

Chris Van Allsburg

“The only questions that really matter are the ones you ask yourself.”

Ursula K. Le Guin

who are information literate. Educating students for the 21st century requires that educators teach students how to be critical and creative users of information. Neither attribute—being critical or creative—can be accomplished unless students are also effective questioners.

Silent-Head Questions

Questioning also plays a huge role in learning to learn. This kind of questioning is not as easy to define as the research question. These are questions that are often not voiced, but are mumbled inside our heads as we proceed with a task. Making students aware of these inner mumblings will help them develop metacognitive abilities.

To nurture learning, it is necessary for students to question so that they have better strategies for interacting with text; it is the question that allows students to make the important self-to-text relationship. Without the silent-head question, analysis of data and ideas would not take place. We can model these questions for students in think-alouds, showing them how we question in our heads as we read a newspaper article, analyze a bill from the hydro company, or examine an art object.

Help students become conscious of these silent-head questions, and control the quality of their quests by having them write down questions until the process becomes intuitive. We offer several tasks in this book to help with this strategy.

Without strong questioning skills, you are just a passenger on someone else’s tour bus. You may be on the highway, but someone else is doing the driving.
(Jamie McKenzie, *Learning to Question to Wonder to Learn*)

Questioning skills will also equip students with the tools to self-analyze. It is with self-questioning that we assess our results and our effort, as well as setting goals for improvement. Again, you need to model how this works and give students ample opportunities to “drive their own bus.”

It is our belief that questioning is at the very core of understanding. Every nugget of learning germinates from an investigation of some kind.

Questioning needs to be nurtured and developed at all ages and for all disciplines.

Questioning is an essential skill.

Questioning is the answer to understanding.

How Do We Nurture the Process of Inquiry?

Increase learning and student achievement by elevating the level of investigation.

Curriculum Focus – Identify what it is you want students to know and be able to do, as well as how students will demonstrate their understanding.

Rich Information – Gather the best resources available to support learning. Consider variety, readability, balanced perspectives, and accessibility.

Engaging Thinking – Design experiences with these rich resources for students to explore the topic and look for connections. These activities should spark their curiosity and wonderment about the topic, as well as building background information.

Building the Question(s) – Ensure that students own the question(s). Provide opportunities and tools to help students design lots of questions until they find the “just right” question for them and/or their specific information need.

Deep Thinking – As students work with information, the guiding question(s) will keep them on track and kickstart critical and analytical thinking about the data they collect. This kind of analysis elevates thinking beyond just gathering and recording, cutting and pasting.

Deeper Understanding – Answering the question will ensure that students reach levels of synthesis. They will draw conclusions, solve problems, make decisions, and invent and create new meaning for themselves when their thinking is driven by their question. Deeper thinking based on effective questions eliminates the possibility of plagiarized reports!

So What? – Students must have opportunities to share their learning authentically with others in order to further value and understand the significance of their findings. They must have opportunities to transfer and apply their learning, to reach metacognition.

The cycle continues as students formulate new questions and/or decide to take action.

Using this Book

We trust that the title of this book, *Q Tasks: How to empower students to ask questions and care about answers*, will help readers understand that this book is not about teacher-directed questions in the classroom. It is, in fact, about turning the tables and empowering students to develop questions themselves. Modeling good questions is an important part of the learning process, and we have woven this important step into the tasks we have developed. There are many professional texts devoted to the teacher as questioner; we saw a need for more practical support for *The Student as Questioner*.

Our hope is that the ideas presented in this book will be a starting point for teachers.

Our goal is to help students build a repertoire of effective strategies and learn to create questions for all kinds of tasks:

- connecting with literature and the arts
- exploring scientific and mathematical concepts
- delving deeper into world issues
- self-analysis and goal setting
- problem solving real-world as well as personal queries
- guiding research quests
- evaluating the reliability of information
- testing new ideas
- inventing
- and more...

The mercuric nature of questioning made our job as authors very tricky. Questioning is not like other skills in the curriculum, for which set rules and processes apply. Effective questioning relies on the inner thoughts, experiences, specific needs, and emotions of the questioner. Questioning is just as much spontaneous and reactionary as it is thoughtful and planned. Having said that, we firmly believe that effective questioning can be taught and practiced. If we are to fully prepare students to participate and thrive at learning, working, and playing in the 21st century, we must equip them with questioning know-how.

In organizing the Q Tasks, we have attempted to analyze the nebulous structure of the question. We have arranged our strategies to create a continuum of approaches. We hope our readers will be able to work with this structure and adapt it to fit their own needs, as they go about building a culture of inquiry in their classrooms, libraries, schools, and communities.

The Q Tasks are organized in five chapters.

Chapter 1 Encouraging Curiosity

This section builds on innate human nature and provides points for nurturing curiosity and cultivating wonder and imagination.

Questioning is cross-curricular and enables all learners to be more successful learners.

Chapter 2 Understanding Questions

The question comes under the microscope and is analyzed for structure and purpose.

Chapter 3 Learning to Question

Collections of tried and true processes for building good questions are shared.

Chapter 4 Questioning to Learn

Many applications for questioning in multiple disciplines, age groups, and abilities are presented.

Chapter 5 Questioning to Progress

These tasks provide transference for students, allowing them to be able to self-question and apply their questioning skills for continuous growth.

Chapter 6 Moving Forward

This chapter will bring our readers full circle, back to the introduction and the importance of questions in building understanding. This is not a final chapter but the beginning of a quest for teachers.

Within each chapter, the Q Tasks have been developed to teach the specific skills and attributes that effective questioners need. The order of the tasks is not intended to be rigid, but simply demonstrates a possible skill-building approach. Classroom teachers and teacher-librarians will need to design a continuum that works for their own student needs.

Each Q Task addresses a teacher need in the form of a question. The “Q Task” description appears on the notepad at the left in student outcome language. Curriculum context for the task is explained in “Clarifying the Task.” Teaching and learning strategies for the lesson are outlined in “Building Understanding.” What students will be asked to do to show that they can use the skill, as well as other assessment tips, are in the section called “Demonstrating Understanding.” The “Q Tip” offers further resources or extensions.

Within each chapter there are also one or more pages of Q Task Quickies. These are usually extensions to a skill already introduced.

We hope we have been successful in lassoing and tying down our questioning ideas and melding them with the excellent work of others before us.