

# Q Tasks

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

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*2nd edition*

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# Preface to Revised Edition

We originally developed *Q Tasks* to help teachers empower students with questioning skills. The strategies we developed for the book were designed to build understanding of question types and purposes, and thus to enable learners to become critical and creative thinkers and questioners, working with any kind of information or ideas to build personal meaning. Questioning skills and smarts are even more important today for students.

Although the strategies in the original edition are as valuable today as they were at first publication, shifts we have observed in pedagogical approaches to learning prompted us to refresh this important book. What we would like our readers to consider now are changes in education driven by the unique opportunities for learning offered by advancements in information and communication technologies. Although the realities of the Internet, social networking, and mobile devices have presented new challenges to educators, the positive impact these technologies can have on learning potential far outweighs the transitional growth pains. The perceived distractions to learning and the adjustments to working and learning in digital spaces can put educators and students at odds. We hope that educators will find that the suggestions we make for almost every task in this edition will give them and their students many new ideas for harnessing the potential of easy and reliable technology tools to boost their experiences with developing questioning smarts.

There is so much information now available to students on any one topic, how can we help them make sense of it all? But information overload is no longer the main challenge, as David Weinberger points out in his book *Too Big to Know*. The depth, breadth, and boundary-less fluidity of information on the Net today means that we will never be able to process everything there is to know about a topic. This changes traditional ideas about knowledge, but networked environments also open up great potential for participatory learning, for knowledge-building and creation that was never before possible.

As knowledge becomes networked, the smartest person in the room isn't the person in front lecturing us, and isn't the collective wisdom of those in the room. The smartest person in the room is the room itself: the network that joins the people and the ideas in the room, and connects to those outside of it. (Weinberger, *Too Big to Know*)

This perspective opens new doors and possibilities for students not only to drive their own learning, but also to create and contribute their ideas to the room. Collaboration is a sought-after skill in future-oriented learning. Every study of 21st-century skills places collaboration high on the list of desired competencies; e.g., *Shifting Minds*, prepared by Canadians for 21st Century

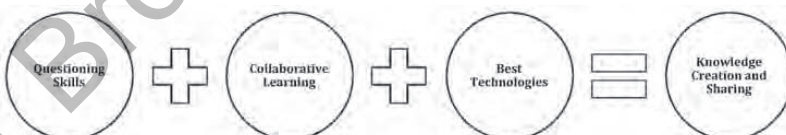
Learning and Innovation, charts desired competencies and provides Canadian-context rationale for shifts in learning.

Educators are making the shift to inquiry learning experiences that apply critical thinking, creativity and innovation, collaboration and communication, transliteracies, responsible digital behaviors, cultural and global citizenship, and character traits that will empower a growth mindset. These abilities are important to rounding out the desired skill sets for the future, and we advocate for continued efforts to engage learners through these approaches. For this revision of *Q Tasks*, we concentrate on additional strategies that enable learners to not only build their personal questioning skill set and attitudes, but also build their ability to work with others, especially in digital environments.

Naturally, this revision cannot stand as a full discussion of the many facets of learning with technology; however, it can provide teachers with some ideas of how to best apply technology tools in combination with the questioning approaches. It can support teachers in designing a learning experience for students that adds potential benefits that would not be possible without the technology.

Now with focused innovation we must invest in new practices that integrate pedagogy and technology, with the former as the driver. (Fullan, *Great to Excellent*)

Collaborative learning has always been a driving force in our work with teachers and students, so it is our pleasure to enhance each Q Task with additional ideas that combine opportunities to boost learning potential with best technologies and collaborative approaches. The results elevate questioning to a new dimension for learners—a place where they are in the driver’s seat, directing their learning journeys, while also taking the journey of participating and contributing to collaborative knowledge creation.



# 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!  
(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 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. (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 that they are driven by the “all about” syndrome, the misperception that collecting facts is adequate. 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.

“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

“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

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 makes 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 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 often are 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.

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

Ursula K. LeGuin

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.  
(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.

## What is Inquiry Learning?

“Inquiry is a dynamic process of being open to wonder and puzzlement and coming to know and understand the world. As such, it is a stance that pervades all aspects of life and is essential to the way in which knowledge is created. Inquiry is based on the belief that understanding is constructed in the process of people working and conversing together as they pose and solve the problems, make discoveries and rigorously testing [sic] the discoveries that arise in the course of shared activity.”  
(Galileo Educational Network)



### **Inquiry Is a Learning Process**

The best inquiry learning experiences represent a process intended to engage learners in discovery, not as an assigned task or an event. To support school curricula, look to the school library community for excellent learning standards, inquiry process models, and information-literacy instruction strategies:

- AASL Learning Standards and Program Guidelines (<http://www.ala.org/aasl/standards-guidelines>)
- CLA Leading Learning: Standards of Practice for School Library Learning Commons in Canada (<http://clatoolbox.ca/casl/slic/llsop.html>)
- Discovery and Guided Inquiry, Ontario ([www.togetherforlearning.ca](http://www.togetherforlearning.ca))
- Points of Inquiry, British Columbia (<https://www.bctf.ca/bctf/pub/index.html>)
- The Inquiry Process, Quebec (<http://theinquiryprocess.ca/>)

In all models, continuous questioning is a key student strategy.

### **Inquiry Is a Social Process**

Inquiry is at its best when teachers design the learning experience to include plenty of opportunity to work with others. Inquiry learning does not have to be a group project, but there must be interaction with others to harvest the best learning. Peer conferencing at stages in the process is one way to ensure that everyone is contributing to skill and knowledge-building. Providing collaborative virtual spaces to work in is another way to design for learning with others. It is also easy to provide immediate feedback to students and archive their progress when their work is digital.

The role of the student [in inquiry] is like that of an athlete: inquiry is a team sport in which we work together and excel when all participants contribute and are helped to do their best. (Wiggins and McTighe, *Understanding by Design*)

In *Guided Inquiry: Learning in the 21st Century*, the authors establish that inquiry learning needs to be a participatory experience, to take place in a community of learners. Questioning will undoubtedly be more successful when all students know they are valued members of a learning community.

#### ***Establishing a Community of Learners***

- Model personal connections
- Create a safe atmosphere
- Encourage students to speak freely
- Accept varied points of view
- Listen to ideas
- Consider students' ideas carefully

(Kuhlthau, Maniotes, and Caspari, *Guided Inquiry*, page 36)

Questioning should become a natural way of thinking and communicating for students in their learning community. However, ensuring that questioning is natural and spontaneous takes some deliberate design approaches, such as

- Considering your own questioning techniques
- Modeling effective questioning in think-alouds

- Displaying good questions and quotes about questioning
- Designing activities that prompt critical and creative thinking and spark a desire to know
- Overtly teaching questioning skills in the context of curriculum content
- Providing time for students to play and experiment with questions
- Designing collaborative question-building activities
- Utilizing best technologies for collaborative knowledge-building
- Teaching strategic questioning with games and drama
- Building a shared language for questioning
- Building background knowledge before inviting students to question
- Designing assignments that give students opportunity to practice being skilled questioners
- Building a learning-to-learn mindset
- Celebrating questions
- Conferencing with students about their questions
- Valuing and assessing questioning

## Assessing Questioning Skills

How do you design for questioning success? Establish the essential questions (McTighe and Wiggins 2013) for the lesson or unit, target the curriculum learning expectations and questioning approaches you wish to apply, and design how they will be assessed. Now share this information with students and develop their learning goals together. Chart the goals on anchor charts as a visible reminder of expectations and return periodically to monitor class progress.

Essential questions do more than focus the learning for students and teachers. They specifically model the kinds of thinking that students need to emulate and internalize if they are to learn to high levels independently. Put simply, the essential questions model for students the kind of questioning they need to be able to do on their own. (McTighe and Wiggins, *Understanding by Design*)

What counts as evidence of student growth? Many student products and demonstrations substantiate achievement: for example, the question-building worksheets in this book, learning logs and journals, exit cards, inquiry portfolios, peer conferencing records, videotaped discussions. You can develop tools to measure growth based on assessment criteria: rubrics, checklists, and rating scales (see Evidence of Questioning Success rubric on page 12). Observation of students' growth over time, supported by timely teacher feedback that provides students with improvement strategies, might be the best form of assessment to ensure questioning success. We suggest keeping track of student application of questioning knowledge, behaviors that indicate positive attitudes about questioning, and indications that questioning is becoming a natural attribute of the student's learning-to-learn toolkit.