

Teaching Students to Formulate Their Own Questions

A Small, but Transformational Innovation in Classroom Practice and Learning

Developed by The Right Question Project, Cambridge, MA

I like learning to ask questions because they help the individual out. You don't have to sit there and think, "Oh, this is hard." The questions give you clues how to go. A student in an adult diploma program in Pennsylvania.

Teaching students to ask the right questions is one of the greatest skills we can instruct. Their questions also give me insight to their prior knowledge, level of interest and direction to continue...High School teacher from Wisconsin.

Simple Idea. Powerful Application...A major 'AHA' moment. This empowers students to be responsible for their own learning and also helps them refine a skill that has direct practical function and application in their daily lives...Middle and High School Teachers in Washington and Maryland.

I have shared the strategy with my colleagues. Some of them did not think students would be able to do this. They were wrong. They enjoyed the strategy and I think it inspired them...to get their kids to ask questions. High School teacher in Portland, OR

My students were so struck by how learning how to formulate their own questions helped their learning process that they said: 'Why couldn't I have learned this in high school?' Shirley Jackson, a teacher in a GED class in New Hampshire

Teachers, both veterans and novices, are astounded by the changes in their students who have had the chance to learn to use The Right Question Project's methods. The learners in our programs, ages 16 and above, never did well in school, but the Right Question Project (RQP) has created methods that turns them into active, curious, confident learners and citizens. It is amazing to see the power of RQP's simple methods that accomplish much more than far lengthier and more complex programs. Art Ellison, Director, Bureau of Adult Education for the State of New Hampshire.

The Right Question Project (RQP) has done brilliant, pioneering work on finding simple, innovative ways to teach highly sophisticated thinking skills to all people, no matter their level of education, income or literacy. RQP's methods are urgently needed in our schools today and directly relevant to any effort to improve academic achievement for students in all communities. Prof. Richard Murnane, Harvard Graduate School of Education, co-author, [Teaching the New Basic Skills](#).

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Why is the skill of question formulation so significant? The ability to formulate one's own questions may be, other than basic literacy, the most important learning skill available to a student, an employee, a scientist and a citizen.

Students who ask questions, who ask good questions, and who can set and follow a line of inquiry will succeed at a far higher rate than those who either do not know how to formulate their own questions or simply fail to regularly generate their own questions.

Prominent college presidents have made the case for the importance of the skill of question formulation when they responded to a reporter's inquiry about what a student should get out of four years of college. There is, several insisted, just too much knowledge and information in the world and it would be impossible to teach it all to a student or for a student to learn it all. Instead, a college should make sure a student knows how to ask questions. Leon Botstein, the President of Bard College, said the "primary skills should be analytical skills of interpretation and inquiry. In other words, know how to frame a question." Nancy Cantor, current President of Syracuse University, said that the world is so complicated that "the best we can do for students is to have them ask the right questions." (*The New York Times*, August 4, 2003).

Who does learn to formulate their own questions? One of the world's greatest minds, the physicist Edward Witten of the Institute for Advanced Studies at Princeton, considered by many to be Einstein's successor, says that he actually spends his days trying to find the right questions to ask. His colleagues on a prestigious task force on the future of particle physics second his claim with an acknowledgement of the role of "the right questions as critical to their work."

They recognize the central importance of the skill to any intellectual endeavor, but they are also among the relatively few who continue to develop their ability to formulate questions. The opportunity to learn the skill takes place only in very limited circles; perhaps in some institutions of higher education or through advanced professional training, or years of experience in a specific field. But, should the skill be reserved only for those with access to an elite education or who have achieved a level of professional mastery including judges, lawyers, doctors, researchers, scientists, evaluators, and journalists among others?

Who is Not Learning to Formulate Their Own Questions? Must we just accept that in public education, a lucky few students will pick up the skill by osmosis, or with family encouragement, or thanks to an unusually gifted teacher, while others will never gain access to it?

Unfortunately, that seems to be the case, for the skill of question formulation is neither systematically nor effectively taught at any level of public education. Students in low-income communities, who need more, not less access to effective learning strategies to overcome significant disadvantages, rarely, if ever, have the opportunity to learn the skill.

If college presidents and the best scientific minds in the country agree that the ability to "frame questions" and "ask the right questions" is central to their endeavors, what does it mean if the skill is not deliberately taught to all students in public schools? What can be done?

A Simple, Necessary and Transformative Innovation: Teaching the Skill of Question Formulation

We need to deliberately teach the skill of question formulation to all students, and especially to students on the wrong end of the achievement gap. Teaching the skill would be a simple but very powerful *innovation in education. The need for it may seem so self-evident as to go without mention, and is,*

therefore, continually skipped over. Or is it skipped over because teaching such a sophisticated skill to all students just may not be possible?

A Proven Strategy: The Right Question Project's *Question Formulation Technique*

The Right Question Project, a small non-profit in Massachusetts with a national and international reach, has created what many people around the country consider to be the simplest, most powerful strategy for teaching anyone, no matter their educational, income or literacy level, to:

- Produce their own questions
- Improve their questions
- Strategize on how to use them

It is easy to rush by these three outcomes, but, imagine students in classrooms all over the country, on all levels, in all communities, stuck with blank and confused looks on their faces. They just heard something from the teacher or were asked to do something and now realize they do not understand the assignment, essential course content, or key concepts. But, then, they begin to generate their own questions. Imagine their intellectual growth as they learn to improve their questions, sharpen their focus and clarify what they really want to know. And, then, imagine the sophistication that comes with being able to assess which questions they should focus on first, which ones will address their initial needs for information and which ones will lead to a deeper understanding of the subject or task in front of them.

Keep all that in mind, and, then, compare those students to ones who do not know how to formulate their own questions. The students who learn to use The Right Question Project's **Question Formulation Technique (QFT)** rapidly climb a very sharp learning curve that might otherwise take years to learn, if ever.

The Essential Steps of the Question Formulation Technique (QFT)

The QFT has the following key components:

- A focus or prompt to begin the question formulation process
- A rigorous process for divergent thinking that produces many questions using RQP's *Rules for Brainstorming Questions*. The rules were developed and tested over a seven year period to come up with the fewest possible rules to produce a question generating process.
- Steps for understanding the differences between open and closed-ended questions, their different purposes, the advantages and disadvantages of both as well as a process for practicing changing questions from one kind to another
- A process for prioritization of questions that provides opportunities for convergent thinking and for comparing, categorizing, and analyzing the relative value of the questions generated through the brainstorming process
- Planning for next steps in the research and learning process
- Metacognitive exercise about the learning process and outcomes that leads to a greater internalization of both the skills for generating effective questions and the subject and content-related topics

The QFT is not designed to be an exhaustive manual on all that could possibly ever be known about questions. Its great power lies a) in its simplicity and b) in its universal value for students on all levels who can use it repeatedly in all subject areas. It offers both a jumping off point for new learning and exploration as well as a valuable tool for assessing current understanding, for more in-depth research and analysis, and for development of new ideas and ways of thinking.

The QFT also manages to pull off something quite difficult; it effectively addresses two opposing challenges related to teaching the skill of question formulation:

- **What seems simple is actually quite complex:** the ability to formulate one's own questions is a very sophisticated, higher order thinking skill that many people never learn or never learn to do well.
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- **What is so complex can actually be made simple:** as complex as the skill of question formulation may be, it can be broken down into simple, easy-to-learn and easy-to-teach steps that all people, no matter their educational or literacy level, can learn.

What do Teachers Need in Order to Use the QFT in the Classroom?

Using the QFT in the classroom requires “just” one simple shift: from the teacher preparing all the questions, posing all the questions of students or even asking “if there are any questions,” to the teacher using a deliberate process that results in students knowing how to formulate their own questions. One teacher, after using the QFT, put it clearly: *This is a change for me, but teaching students to pose their own questions is teaching students how to learn.*

This one seemingly small change actually represents a challenging and significant adjustment in behavior and expectations for teachers as well as for students. We have found that there are roughly three large categories of teachers who are introduced to the QFT. Around 20% very quickly can make it part of their classroom practice. These teachers are open to encouraging inquiry-based learning, are comfortable with promoting student participation, and yet may not have had simple methods for promoting student inquiry. They find that the QFT provides them with a powerful tool for systematically building student's critical thinking skills. One high school teacher commented: *Although I have had my students formulate questions, this method is more generative. It also creates a community of questions that help to drive learning.* Another teacher observed how the QFT *invites students to be thinkers- to articulate what they don't know but want and need to know.*

There are roughly another 20% who are at the other end of the continuum. They feel far more comfortable with a teacher-centered classroom in which there is not much room for students to formulate their own questions. They are not likely to deploy the QFT in their classroom

But, by far, the largest group of teachers may be the 60% or so who are open to practices that can help their students take more ownership of their own learning, heighten their critical thinking skills and achieve more, yet, they are unsure of exactly how best to incorporate the QFT into their classroom practice. One enthusiastic teacher in Oregon taught the QFT to her colleagues and reported: *Some of them did not think students would be able to do this. They were wrong. They enjoyed the strategy and I think it inspired them to...get their kids to ask questions.*

For that large group of teachers who are reluctant, lack confidence or are simply skeptical, we have found that they need support and training in specific aspects of the QFT, including how to:

- identify opportunities for incorporating the skill-building aspect of the QFT into different subject areas
- design effective prompts to start the question formulation process
- support students at different levels and readiness to formulate their own questions
- clarify and guide the use of the prioritization process
- support, respond to and guide the emerging lines of inquiry that emerge from the QFT

Teachers who have taught The Right Question Project's question formulation methods in their classrooms find that they are better able to:

- create a dynamic learning environment in the classroom
- engage traditionally disengaged students in new avenues of inquiry
- assess depth and range of student knowledge and interest
- create lesson plans and adapt curricular content to meet the needs and interests of different students

- promote greater student ownership and initiative
- build critical thinking skills of all students

The relevance of the QFT for traditionally unsuccessful students

The QFT has been most extensively used in adult education programs in several states around the country, primarily New Hampshire, Vermont, Rhode Island, Pennsylvania, Indiana, Missouri, New Mexico and Arizona. The teachers consistently observe and hear from their adult learners – all of whom had not finished high school and were at varying levels of literacy – that the QFT is a transformative educational experience for them.

Based on the success of using the QFT in adult literacy, GED and ESOL programs, the Right Question Project has begun to introduce the process to middle and high school teachers at national conferences and the results, they report, are very similar. Use of the QFT produces students who for the first time:

- gain confidence in their own original thinking ability
- take greater ownership of their own learning
- generate new ideas for more in-depth study
- make new connections between wide-ranging ideas and themes
- analyze and reflect more deeply upon their own readings and research
- identify previously undetected patterns
- explore new avenues of study
- apply their new question formulation skills to improving their reading and writing abilities and exam performance

A student in an Arizona GED program said: *You become a better thinker and think more logically...constantly problem solving and trouble-shooting. I always feel good about handing in my work when I use questions.* A student in an adult diploma program in Pennsylvania wrote: *I like learning to ask questions because they help the individual out. You don't have to sit there and think, "Oh, this is hard." The questions give you clues how to go.*

A teacher in a New Hampshire adult diploma program for 16-18 year olds (who had already dropped out from high school), was struck by how the process engaged traditionally disengaged learners and transformed them into independent learners. The QFT, she said, is the tool to use if *you want to encourage your students to be self-directed learners and take responsibility and charge of their own learning.* Her students were so struck by how the QFT helped their learning process that they said: *"Why couldn't I have learned this in high school? And, another teacher taught the process to her students and said: "One of the guys came up to me and said: 'This was really hard. But, I'd really like to do it again!"* (<http://www.rightquestion.org/node/61>)

An adult educator in Vermont observed that *expanding on questions in this manner can help to overcome the silences that exist in the classroom if students don't react to the questions or the material presented...I think it became more clear to me that the practice of students' asking questions is vital to learning in my classroom.* Another adult educator commented that *there are many possibilities for using this process-but the first step is to show students the process, have them understand the value of questioning, then use it as a tool during future classes to prompt students to think in greater depth and more critically. It is also a great spark for a class that is becoming disengaged because it is so participatory.*

The effectiveness of the Question Formulation Technique is grounded in its origins: The QFT did not develop in a university or a think tank. Far from it. The insight about the importance of the skill of question formulation came from an overlooked source of wisdom: parents of children in a low-income community in Massachusetts who were struggling in school. RQP Co-Directors, Dan Rothstein and Luz Santana, have described what happened as they were working on a drop-out prevention program:

The parents told us that despite their concerns about their children, they would not come to meetings at the school because they “didn’t even know what to ask.” We were very smart for it only took us one or two...thousand times of hearing that statement to realize that maybe they had something there. So, of course, we did the wrong thing and gave them a list of questions to ask. This only fostered greater dependency.

We were then forced to take on the challenge of how do you teach the skill of question formulation to people who have not had access to higher education, many of whom did not finish high school and some of whom have low levels of literacy.

That started a 15 year journey that has led to RQP developing an unparalleled expertise in developing innovative methods for teaching the skill of question formulation in even in the most challenging of conditions. There was no road map on how to teach the skill when RQP began. But, RQP persistently tested and refined and, eventually, simplified easy-to-learn and easy-to-teach methods for fostering the skill of question formulation. The first attempt, a 32-hour curriculum to help parents participate more effectively in their children’s education, eventually was boiled down to the QFT which can now be taught to anyone in a brief 10 minute interaction and, has been learned by using self-teaching booklets and guides.

The QFT is one example of why The Right Question Project has been lauded for creating robust, innovative educational methods for building the capacity of all people, no matter their educational, income or literacy level, to learn to think and act on their own behalf.

In addition to its use in the classroom, the QFT has been successfully taught to a remarkably wide range of people in low and moderate-income communities all around the country, including:

- patients at community health centers and mental health clinics to promote more patient activation and participation in shared decision-making with health care providers
- resident leaders in low-income neighborhoods to advocate for neighborhood needs
- parents of schoolchildren in low-achieving districts to build their capacity to support, monitor and advocate for their children’s education
- residents of shelters for battered women to identify ways they help themselves and their children
- inmates trying to prepare for a productive re-entry process after release from prison
- unemployed workers seeking job training options.

Martha Minow, Dean of Harvard Law School, has talked about RQP's groundbreaking work on parent involvement in a public lecture. *One impressive effort...The Right Question Project...prepares parents to advocate, to participate in decision-making processes and to hold decision-makers accountable...What I appreciate about The Right Question Project is its effort to meet people where they are. Equally important is its recognition that no system, no professionals, no individual dealing daily with large numbers of people can meet all their needs without the avid involvement of those whose needs are to be met...* (Justine Wise Polier Memorial Lecture, 2001)

Working quietly for nearly two decades, the Right Question Project is always trying to further develop the simplest, most powerful strategy for helping people learn to think and act on their own behalf. In the process of developing the strategy, RQP has created universally relevant methods that are enthusiastically embraced for their power and originality by highly educated audiences, including graduate students at the Harvard Graduate School of Education, students at Harvard Law School, medical school faculty, physicians and researchers and award-winning journalists (Nieman fellows). The specific language used might be different, but in every setting, there is a strong sense of discovery, of new understanding, of excitement, of brains working more effectively and a new clarity about the power and value of generating their own questions. Formal research further validates the value of the RQP strategy.

The Evidence that Supports the RQP Strategy

The data about RQP's work in every field shows a consistent pattern of cognitive, affective and behavioral changes. Evaluations of RQP's work in parent involvement, for example, consistently show that teaching RQP's skills, leads to greater and more effective parent participation (in Kentucky, Ruscoe and Gaus, 1997, and in Goals 2000 evaluation of RQP in Massachusetts, Almeida, 1998). An evaluation of welfare clients in a family literacy program in New Hampshire shows sharp increases in executive function skills and greater self-efficacy (Kierschnik, 2000). Research by scholars at Yale University showed RQP's civic engagement strategy led to increased voter registration rates among adult literacy students in four states (Green and Ha, 2009). RQP materials and training in Massachusetts led to parents of children in subsidized early childhood programs to partner more effectively with providers and secure needed services for children at a critical stage in their lives (Pizer, 2005).

Recently, researchers in the health care field have become interested in the relevance of RQP's core strategy to increasing patient activation. A NIH-funded pilot initiative teaching RQP skills to Latino clients of a community mental health center showed that intervention subjects were over three times more likely to be retained in treatment and four times more likely to be engaged in care than comparison patients (see *Medical Care*, March 2008 and *Health Education and Behavior*, 2008), producing results in a short period of time similar to those achieved in much lengthier programs and methods including motivational interviewing. The research in mental health has now been expanded to a national study. In a new study in progress, the Department of Community Medicine at the CCNY Medical School in New York has prepared medical students to teach the RQP Strategy to patients in waiting rooms in community health centers in the Bronx and Brooklyn.

Information about The Right Question Project

The Right Question Project (RQP), founded in 1991, has pioneered the development of a participatory educational strategy that builds people's capacity to think and act on their own behalf. RQP is a valued resource for organizations across many fields because RQP's skill-building strategy has proven effective in helping all people—no matter their educational or literacy level—to advocate for themselves and participate in key decisions that affect them.

RQP's strategy is remarkable for both its universal value as well as its relevance to specific issues in so many fields, including education, health care, adult literacy, job training, social services, housing, welfare, economic development, community organizing and citizen participation.

RQP is widely recognized by participants in programs, staff in the field, and outside researchers and evaluators for its *unique expertise in the design of educational methods and tools that are simple yet powerful, and lead to immediate and long-lasting positive changes*. This is evident in RQP-designed workshops and materials as well as through the implementation of engaging facilitation and training programs.

RQP's bicultural and bilingual leadership has modeled a commitment to diversity and innovation as well as a passion for learning from people in the field who adapt RQP's strategy to best meet local needs.

What I appreciate about The Right Question Project is its effort to meet people where they are. Equally important is its recognition that no system, no professionals, no individual dealing daily with large numbers of people can meet all their needs without the avid involvement of those whose needs are to be met. - Martha Minow, Dean, Harvard Law School, (from the 2001 Justine Wise Polier Memorial Lecture)

The RQP Strategy: RQP's unique educational strategy includes:

- Concrete tools for teaching key thinking skills
- A range of effective and innovative teaching methods to promote learning, understanding and action
- Workshops and curricula in specific fields or content areas that incorporate the teaching of the skills

The Right Question Project is led by Co-Directors Luz Santana and Dan Rothstein

Luz Santana, M.A., has modeled in her own life--raising her family on welfare, working on the factory floor, going back to school and then sharing her new skills with others--much of what we aim to accomplish through the work of the organization. She has extensive experience designing and implementing applications of the educational strategy in work in low-income communities, and she is recognized nationally for the participatory trainings and workshops she has designed and facilitated. Luz was chosen as a Community Fellow at M.I.T, and the Merrimack Valley Woman of the Year. She has served as a parent advocate in Lawrence, MA, and as an adjunct faculty member at the Springfield College - Boston Campus. In 1996, she received a Master's Degree from the Springfield College School of Human Services.

Dan Rothstein, Ed.D., has spent many years learning from the people with whom he has worked and has applied those lessons to designing strategies to promote more effective advocacy and citizen participation efforts. Prior to his work with RQP, he developed and implemented programs in Kentucky, Massachusetts, and Israel as a community educator, organizer and urban planner. He served as Director of Neighborhood Planning for the City of Lawrence, MA and was a Fulbright Scholar and one of the very few non-academics to be chosen as a National Academy of Education Spencer Fellow. He graduated from Harvard College and earned a doctorate in Education and Social Policy from the Harvard Graduate School of Education where he served as an editor of *The Harvard Educational Review*.