

STEP 2

Why do we need a research question?

This is a lesson designed to help students develop productive research questions and then write an introduction for a presentation or report that persuades an audience that they should care about this question. This lesson is our attempt to highlight both: 1) how the research question shapes all the steps in the research process and 2) the importance of choosing--from among the many possible questions that will emerge from consideration of any topic—the question that comes closest to what students care about.

Introduction:

The research process begins with a question.

A research question helps researchers to focus their attention during the entire research process. In *TfC* the research grows out of issues the research team cares about in their school or community. So, we on the research team want to begin by thinking about challenges in our community and, in particular, challenges high school students have a unique or underpublicized perspective on.

Once we come up with the issue, challenge or problem the real work lies in converting that into a question that requires new data to be answered and (thus) can focus the work of the team for the rest of the semester/year. Here are some research questions other high school students have asked:

- “What is the relationship between activities for teenagers and violence?”
- “How might lowering the minimum voting age to sixteen in local elections impact the quality of citizenship in our communities?”

Bill has a story that illustrates the challenge of moving from a problem to a question.

The Crooked Tree

- “We had this tree in front of our house. It was a young tree, about 5 years old, but it started to lean, and each year it leaned even more.
- I thought that I needed to force the tree the other way. I had seen trees in which ropes were attached to stakes in the ground that had the effect of pulling the tree in a new direction. I thought--and it just seemed so obvious—that this is what I need to do. Faced with the problem of a leaning tree, I framed this question: “How do I stake a tree?”
- I went on the web and downloaded lots of information on how to stake a tree. Then, I bought the recommended supplies: plastic stakes and rope from the store. I put a lot of work into digging the stakes into the ground and trying the rope very tight so the tension would force the tree to grow straight. I was super proud of myself; proud in the way you are when you cross something big off your “to do” list.
- A couple of months passed, and the ropes were loosening and the tree was getting worse. I was hoping no one would notice, but I saw a guy from a tree company cutting down one of my neighbor’s trees. So, I asked him, “Why wasn’t my tree growing straight?” And he answered, “Do you mean beside the fact you staked the tree—and, by the way the idiot you paid to do the work did a lousy job. Next time you see him tell him that staking a tree that was leaning that much will never straighten it. “
- He went on to explain that the *location* of the tree was the problem. It was wedged between a much bigger tree and the house so that it couldn’t get the sun it needed. It was growing the way it was so it could get access to the sun. He said because of the age of the tree, I had a choice: I could live with the leaning tree--he thought it would not get worse—or, I could move the tree to a sunnier place, which would be a very big job.

- The *real* question, then, was NOT: How should I stake the tree. IT WAS INSTEAD: Did the leaning tree bother me enough to spend the money to hire someone to move the tree?
- **I had asked the wrong question!** In other words, I had asked and answered the wrong question and because of that everything I did after that was a mistake.”

Bill tells this story for a number of reasons:

- First, anyone can work really, really hard and still be an idiot by thinking that he or she has crossed a problem off his/her list.
- Second, we all have instincts about issues that we know little about. Sometimes we get lucky but more often than not these instincts will be wrong. It made perfect sense to Bill that if his tree was leaning, he should stake it—no brainer. Of course, he was wrong.
 - It makes sense to come up with an initial question to get focused—i.e. some question about fixing the tree. But not assume that this is the final question.
 - We also need to be open to new information. Bill was so sure he was right he didn’t even consider the possibility that he was wrong. Everyone needs to be willing to tweak or revise an initial question with new information.
- Third, conversations with people who know about a topic can help your class identify the right question.
- Fourth, getting the question right is important because a research question determines the next steps in the research process—what method one chooses and what a survey will look like depends on the way a research question is worded

In many cases the *TfC* may be the first time a student has to rationally unpack a complicated real-world problem. For example, when the *TfC* group investigated the implications of hunger in their community, the students began to see the interconnectedness of the issues: helping

organizations, governmental oversight and other aspects of the socio-economic dynamics of hunger. As one student said, “It is like a bowl of spaghetti.” The challenge is for a teacher to facilitate the student’s transition to a more nuanced way of thinking, so that young researchers learn to listen and identify what is most important to the challenges that people in their communities are experiencing. This might begin with the question:

- Can you think of an example in your own life where you began a project by asking the wrong question?

