HOW TO Refine a Research Question

Start with four core principles:

1. Ask only real questions. Don't do research to confirm teaching practice you already believe is good or bad. Ask questions whose answers you are not sure about.
2. Avoid asking yes/no questions.
3. Eliminate jargon.
4. Avoid value-laden words or phrases.

For example, the question might begin as follows:

> Do LD/ADHD students engage in meaningful discussions during literature circles?

The final answer to this question, a yes or no, won't get at key issues of how/why/when these students are involved in talk. There is also the sense that the researcher is setting out to prove a preconception—either he supports certain students being in these groups, or he doesn't.

First, change the research question so that it is open-ended:

> What happens when LD/ADHD students engage in meaningful discussions during literature circles?

Next, underline any words that are jargon and rewrite them so that any reader could understand what you mean:

> What happens when LD/ADHD students engage in meaningful discussions during literature circles?

The definitions of *LD* (learning disabled) and *ADHD* (attention deficit hyperactivity disorder) are debated even among educators and would likely be unknown to a lay reader. *Literature circle* refers to a specific curricular innovation that is defined differently among teachers.

The revised research question becomes

> What happens when students identified with special needs engage in meaningful discussions during reading instruction?

While *identified with special needs* and *reading instruction* are much broader, they are terms anyone can understand, and they can still be defined more specifically in the actual study.

Finally, underline and change any value-laden words that would require explanation for readers:

> What happens when students identified with special needs engage in meaningful discussions during reading instruction?

Part of the goal of this research will be to get at how the teacher and her students define *meaningful.* This word needs to be cut from your research question so that the values the researcher shares with her students, and the values that might divide the classroom community, can emerge from the study.

But it is a terrific exercise for any researcher to consider the ideals lying beneath value-laden words. When refining your research question, try to brainstorm on your own how you define words like *meaningful,* and also ask students to define what makes a literature discussion meaningful. By ferreting out value-laden words in your research question and subquestions, you can begin to get at your biases and preconceptions before the study begins.

The final refined research question becomes:

What happens when students identified with special needs engage in discussions during reading instruction?

Another important aspect of these teachers' research questions is the focus of the study—their students. Often, questions in the initial raw stage center on our work as teachers. High school teacher Denise Sega warns against falling into this trap when she tells the genesis of her own research question:

> When I began the work that led to my article "Reading and Writing about Our Lives," my original research question asked how *I* could motivate a group of uninterested students to learn. What could *I* do to help them achieve? However, as my work progressed, I realized that *I* was not the center of the study—the students were. This sparked the concept of collaboration, refocusing my reflection to see how we—the students and I—could discover a new way to learn together, rather than my deciding on a way to teach. It was this idea of collaboration that led to more meaningful research and discoveries than I ever would have found alone. (1997, 174)

Like Li's questions mentioned at the beginning of this chapter, your research questions may come from a glimpse of something out of the corner of your eye that intrigues you. They might burst forth from students who keep you up at night, observations that surprise you, tensions in your class, or from individual students that just plain mystify you. Here is a list of questions that teachers we know are pursuing:

How can parents help set student goals and assess their child's growth?

What are the patterns of engagement during group work in my math classes?

What happens when Title I students are incorporated into regular classroom literacy groups?

How do reading response journals serve as a tool to help students become more thoughtful readers?

What happens when students use self-reflection in science as a means of assessing growth?

How does role playing affect first-grade writing?

How will home-school communication journals influence the student-parent-teacher collaboration?

What happens when I encourage Sheila to voice her opinions and insights?

How does math literature influence the oral and written communication of math concepts?

How can a child with severe physical impairments demonstrate reading ability? (special education with a child who is wheel-chair bound and cannot speak)

How does the use of storytelling help students connect to historical information?

What happens when I parallel a movement workshop to a writing/reading workshop?

What effect do the artwork and other artifacts posted on the walls of my middle school art room have on my students' art literacy?

In my two-way bilingual class, what happens to Spanish language usage by my "English experts" when they have focused Spanish lessons for English-only speakers?

In what ways might participation in deliberately designed rites of passage provide teenagers a clearer passage into adult life?

How does incorporating writing and art into science instruction affect female attitudes toward science?

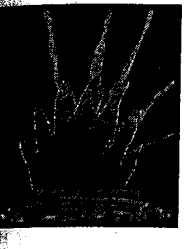
How does self-esteem affect creative expression in writing groups?

What happens when choice and collaboration become an integral part of the fifth-grade science curriculum?

What are the changing attitudes of my students toward French language and culture as they acquire French as a second language?

What questions do my first-grade students ask one another during writing time?

These questions show that any curriculum, grade, or concept is open to exploration by teacher-researchers. What matters isn't how experienced you are—it's how willing you are to ponder questions with no easy answers.



Strategies for Working Toward a Research Question

JoAnn Portalupi

Two years ago, my nine-year-old son came home from school with an assignment to write a book report over the spring break. The weekend passed into Monday. Tuesday and Wednesday came and went before I finally decided to ask him about his plans for completing it. I wanted to gently remind him that he wouldn't write it out clean onto the final draft paper the teacher had given him but would want to draft it first and work to bring it to its final form. He glanced at me impatiently and replied, "Mom, this isn't writing workshop!"

It is a sunny morning in a first-grade classroom and the room buzzes with the noise of busy writers. Two boys decide to share their work with each other in the corner with the big stuffed pillows. I am interested in the kinds of response first graders give to one another. They agree to let me listen. Jonathan reads first his story about a visit to New York City. When he finishes, Brent says, "Good." He picks up his paper and begins to read about his cousin sleeping over during the weekend. When he finishes, Jonathan nods approvingly, picks up his story, and says, "Okay, my turn." Once again he reads about his New York visit. I leave a little later as Brent is starting in on the second reading of his story.

These are but two incidents among many that have caused me to wonder about the nature of work in classrooms and about the nature of learning in general. When my son remarked, "This isn't writing workshop!" I wondered why the process he practiced during that particular time of the school day was not something he sought to employ during other writing experiences. It caused me to speculate about my work as a staff developer. Had I been negligent about helping teachers see writing workshop as connected to the rest of the time spent in schools?

When I was listening to Jonathan and Brent, I was struck silly over the clash between my expectations for peer conferences and those of these first graders. It was clear they were getting the kind of "help" they had hoped to receive. I left the classroom wondering exactly what it is that first graders expect to get out of conferences with their friends?

Asking questions of our classrooms is as natural as breathing. Teachers who conduct classroom-based research turn those wonderings into research questions they can systematically pursue. Those who continue to incorporate research into their teaching know two things. They understand research to be an integral and energizing aspect of teaching. They have learned how to streamline their research questions so they fit into both the dailiness of teaching and into the long-term learning goals they hold for their students.

A colleague of mine hangs a sign on her classroom door: The first real step in learning is figuring out the question. For teachers wanting to do

research, this is often the first struggle encountered. Framing the question can feel like a "chase in the dark" game. The teacher-researchers I've worked with over the years have expressed a wide range of response to this frustration. Some see too many questions to ask, yet when they try to single one out they find themselves holding a tangled knot of questions. Others wonder when the process of framing a question ever really ends. Just when they think they have the elusive thing pinned down, it shifts before their very eyes. Question posing can at times present a conundrum—many teachers report their ability to frame the question only after they get a glimpse at the answer. Nonetheless, the process of articulating a question is an important one. Not only does it initiate the research but it plays an important part in the research process itself.

There are a number of strategies you can use to guide yourself through the process of "figuring out the question." I'll explore some of these with attention toward helping you integrate your research and teaching.

Tap your available resources—your daily work and the wonderings that arise from it. Though questions are informed by the theories we bring to our work—personal theories and theories we've read from others—they are most commonly born from our day-to-day experiences with students. Glenda Bissex (1987) writes that teacher research begins not with a hypothesis to test but more with a wondering to pursue. Begin by paying attention to these wonderings. Adopt your first research tool—a journal—where you can record the queries that arise during the day. Don't worry that they are always framed as questions. Include the things that surprise, concern, or delight you. After a week or two, go back and reread your jottings. Are there themes of interest that emerge?

List questions about the area of interest you discovered. You'll probably find it easier to generate a list of related questions before writing one inclusive one. I have a general interest in how teachers learn to teach writing. In thinking about that broad question, I wrote a series of smaller questions. How does a teacher's own writing affect his or her teaching? How does a teacher's history of learning to write affect his or her development as a teacher? What do the shifts look like in teachers' thinking as they make pedagogic changes? What supports teachers' growth as they implement a new approach? What hinders? What kind of talk do teachers trade about the teaching of writing? How does it impact their daily actions? Why do some teachers make the shift to a process approach more easily than others?

Examine your list of generated questions. In generating this list of questions, I'm careful that each one is genuine. I don't want to ask a question that leads me to document something I already know to be true. For instance, I can pretty much answer the question, What happens when a writing process approach is mandated in a school? My experience leads me to a fairly knowledgeable hunch about the answer. There is, however, much I

can pursue about the topic. I am genuinely interested in understanding what conditions support teachers' implementation of a mandated approach.

I also want to read my questions to see if they can be answered. The best research questions often begin with the words *what* or *how. Why* questions ask you to trace the source of a phenomenon. You can develop a hypothesis as to why something occurs, but to conclusively identify the source is virtually impossible. By contrast, *what* and *how* questions lead you toward descriptions of phenomena. These are more easily documented and identified.

You can work with a *why* question to envision the *what* and *how* questions that compose it. Consider my question, Why do some teachers make the shift to a process approach more easily than others? This requires me to look at teachers who have made the shift. What specific changes have they had to make in their practices in order to do so? What problems do they encounter? How do they work through these problems? I may also want to look at teachers who have not made the shift. What factors contribute to their rejection of the approach? What do teachers say in defense of making change? If I can begin to describe the actual process teachers take either toward or away from a direction of change, I may be able to speculate about why some teachers make the shift and others do not. Then again, I may not. Regardless, I will have some interesting descriptions to inform my future work.

Force yourself to write a succinct* what *or* how *question. I've chosen this one: What are the stories teachers tell about their own experiences learning to write? I'm not sure the question is just right yet, but it points me in the direction I want to go. I want to explore the impact of a learning history on a teaching present. So I'm beginning small. This question allows me to start at a decisive point, gathering stories from a selected group of teachers. As they tell their stories, I suspect they will reflect on the meaning they bring today and the ways in which the stories affect their teaching. Beginning with a small focused question will often lead you toward a bigger one. The data I uncover from this question will likely lead me to understand other factors that have an effect on how teachers learn to teach writing.

Practice tunneling in on your question. Don Graves (1994) uses the term *tunneling* to describe the process of anticipating the kinds of data you will need in order to answer the question. This procedure can help you fit your question to the natural structures of your classroom.

One teacher-researcher phrased the question, What is the effect on student writers when their teachers publicly demonstrate their own literacy? In order to answer that question a series of smaller questions will need to be addressed. Notice how each of these questions is written in order to point exactly to the place she will look to gather the data.

What literacy demonstrations does the teacher present in the classroom? (This involves observing and recording visible acts of literacy.) What student perceptions exist about the teacher's use of writing? (You can get at

this by talking with students. Some of this talk will naturally occur during writing conferences.)

What literacy acts do students engage in? (Again, this information can be collected through observation and gathering actual products. If you have the task of taking surveys on your class job chart, students can share the responsibility of documenting the kinds of reading and writing that occur throughout the day.)

This teacher will need to define for herself exactly what constitutes an act of literacy. Since she is looking at the effects on writers, not simply writing, she will also want to understand the ways in which students define literacy. This process of tunneling is another way to test the feasibility of pursuing the question. If it is difficult to see where the data to answer a question lie, then you can be fairly certain the question will be difficult, if not impossible, to pursue.

Be aware of the impact a research question will have on your students. I remember Nancie Atwell sharing the effects her interest in journal writing had on her students' work. She describes the scene in September when she was eagerly writing notes of interest about the thinking students recorded in their reading journals. By June students were beckoning her with reading journal in hand: "C'mere. This is really interesting!"

Students will inevitably pay attention to whatever you're choosing to attend to. If you are looking at the way in which students are affected by a teacher's own literacy, you can be certain that your question will ensure they pay attention to that literacy. My question about the stories teachers tell is bound to orient a teacher toward the histories she brings to her teaching.

Think of your question as a grow light. When shined upon your students, you should see them flourish. Here is where the potential effect of teacher research on student learning is made most visible. Capitalize on it when you decide your area of inquiry. If you want to see improvement in peer conferences, ask a question that will allow both you and the students to pay attention to this aspect of the day. If you want more successful writing in science journals, shine the grow light in that direction. One teacher-researcher I know did just that with the questions, What kinds of writing do eight- and nine-year-olds write in science learning logs? and In what ways do their entries change when they are shared in large class-size groups and small response groups? Research should not be an appendage to your teaching. When carefully thought through, it can be a teaching strategy that helps you realize the learning goals you and the students have set for the year.

One way to ensure that your research supports such learning is to spend ample time in the process of question posing. Don't rush to state a question so your research can begin. Figuring out the question is an important part of the research. Once you've arrived with a question ready to pursue you will look back and see that you are already deeply involved in the work of conducting a classroom-based inquiry, one that will guide the learning of both you and your students.