

Planning for Inquiry

It's Not an Oxymoron!



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Foreword by
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2 Inquiry-Based Planning: How Is It Different? How Can I Get Started?

Most of us were required to do lesson planning as part of our pre-service teacher education. And I'm willing to wager that most of us had to do very similar types of lesson plans. The format might have differed, but essentially, we had to decide on and list our objectives, or what the students would be learning; a planned initiating activity; a step-by-step, detailed plan for the procedures to follow; and a closing, or evaluative, activity. The procedures usually included all the questions we planned to ask, in the order we needed to ask them, and, in some instances, even the expected student responses. I remember how lost and helpless we felt when those responses didn't occur. We had no idea what to say or do next. It's funny to think about it now, but it definitely wasn't funny at the time!

Sadly, it seems that not much has changed with regard to lesson planning in many preservice teacher education programs. It's still all about the teacher. Students have little connection with the lesson except as receivers of what the teacher has planned and delivered. And often, what is delivered is little more than what Diane Stephens refers to as the proverbial "dog and pony show."

I don't argue with the need for teachers to plan. Artful teaching is indeed planful teaching. But planning needs to be consistent with what we know about learning. As our understanding of learning evolves, planning, too, must evolve to incorporate students' interests and wonderings.

Some people mistakenly think inquiry-based teaching involves little or no planning: "Just let them do whatever they want." On the contrary, it involves a huge amount of planning (see Figure 2.1). I spend long hours reading, thinking through possibilities both alone and with others, and gathering materials and resources. You have to be better prepared than ever because you have to be able to respond to children's interests and questions, both anticipated and unanticipated—and believe me, those wonderful, surprising, unanticipated questions will astound you.

Myths about Inquiry	Facts about Inquiry
Inquiry means doing a report.	Inquiry is learning.
Teachers do little or no planning; they just let students do whatever they want.	Teachers do careful planning.
Teachers don't need to know learners, content, or resources; anything goes.	Teachers need to know learners, content, resources, and processes so as to guide inquiry.
Inquiry is an "extra," not part of the established curriculum.	Inquiry is the heart of the curriculum.
With inquiry, you can't meet standards.	With inquiry, you can meet and go beyond standards.

Figure 2.1. Myths and facts about inquiry.

Just listen to some of them—and these are *real* questions from *real* kids: I wonder who invented blankets? I wonder if sea monsters are real? If they had TVs in 1807? If twenty-five elephants can be heavier than the Empire State Building? What does learning mean? Do bugs have souls? How hot is the sun? What would we look like if we didn't have any bones? How does the owl twist its head all around? Do fish get thirsty and what water do they drink if they get thirsty?

Aren't kids' minds amazing? Think about the potential their questions hold for allowing us to take off into experiences and investigations that are open-ended enough to enable each student to enter at his or her own level of development—which is where differentiation comes in. It's okay for them to start wherever they are; they'll continue to refine their understandings as they revisit significant concepts in a variety of different contexts over the years. The possibilities are endless.

The catch, of course, is that you have to know content well, because you have to know where you're going and what you want your students to understand. But that doesn't mean you have to know all the answers to all their questions. You simply need to be a learner along with your students. When you realize that there are infinite ways to get where you want to go, you also realize that your best chance of getting there is to take the journey *with* your students, not to drag them along kicking and screaming behind you. And that means building on their interests and questions, starting with what matters to them and weaving through the curriculum from there. It's a different kind of planning, one that for me is so much more fun and exciting.

Beginning with Students' Questions

Let's look at some quick examples. Suppose I want my students to explore linear measurement. There are countless ways we can address this mathematical concept while meeting their interests. One year, my kids became interested in treasure maps as we read some adventure stories together. So they used measurement to create their own maps to mark the spot where they had buried our Halloween jack-o'-lantern as part of a scientific study of decomposition—and the next spring, they followed those very same maps so they could dig up their “treasure” and find out what had happened to poor Jack.

Another year, the kids wanted to find the shortest route from our classroom to the cafeteria so that one of their classmates who had a broken leg and had to use crutches would be able to navigate more easily. Out came the string, meter sticks and yardsticks, trundle wheels, chalk, and an assortment of child-invented measuring devices, and we were off on a different sort of measurement adventure with an important purpose.

Still another year, one of my first graders asked, “How do you measure something that's bigger than a ruler, if you only have one ruler?” I threw the question back to the class and they worked in pairs to answer it as I watched in amazement. Some kids chose to trace the outline of their ruler over and over on their desktops; others placed the ruler in a more traditional fashion and “eyeballed” their measurements or made markings for accuracy; still others cut string to fit their desktops and attempted to see how many times it would wrap around the ruler. There were as many different solutions as there were pairs of children, all learning more about measurement because of this wonderful question that I'd never have thought of myself—but you can believe I've used that question with many other classes since then!

Here's one of my favorite measurement stories: My student teacher, Kim Min, was required to plan a unit on measurement for her mathematics methods course, but she wanted to link it to our first graders' interests. Kim and I brainstormed several possibilities for incorporating measurement, but none of them seemed exactly “right.” Meanwhile, the class had been studying about outer space and the students were preparing to share their learning with each other. Kim asked them, “What makes a good presentation?” She had thought the kids would say things like, “Speak clearly,” “Look at the audience,” or “Know your material,” and she was not at all surprised when some of those thoughts emerged. But then one child said, and the rest enthusiastically agreed, “To have a good presentation, you need a stage!” (You

never know what kids are thinking!) Kim realized immediately that this was the opportunity she was looking for: To explore measurement, the kids would build a stage! And so they did. They spent the next several weeks planning and building. They learned how to measure the available area, create and evaluate blueprints and scale models (first-grade versions), and finally, to choose and build the finished product. The collaboration and decision making involved in the process were invaluable as well, and the satisfaction they gained from actually using their creation for their presentations was immeasurable. The stage remained in our classroom and was well used for both formal and informal events throughout the rest of the school year.

I hope the above examples have helped to show what I mean about how we can link the students' interests to worthwhile learning in any number of ways. In each of these four different experiences, the kids were exploring linear measurement, but they were doing so in the context of a problem that mattered to them. When the interest is there, the learning will follow.

Listening to Students' Wonderings

Sometimes we can gain insight into students' thinking, and generate ideas for curriculum, by doing a bit of eavesdropping. One day, I overheard this conversation among a group of my first graders:

Kaeo: Who invented the period?

Jon: Maybe someone was accidentally running and the pencil point made a dot.

Ire: Maybe they dropped their pencil and made a dot.

Tavana: Maybe George Washington invented it.

Kaeo: Maybe Jesus, when he got bigger and thought about it.

Tasha: Maybe God invented it.

Kaeo: Maybe it was made of rain. God looked at the water and saw little tiny dots.

Tavana: Maybe he couldn't read the words. They got all squooshed up.

Ire: Maybe he made a dot on paper and said, "Oh yeah, that could be a period."

Brittany: It's good thing. If we didn't have (periods), it wouldn't make sense.

I was completely taken with this discussion, not just because they were talking about punctuation—which I had not expected would be the topic of their conversation at all—but because of what they

were asking about it. Even though these students already knew what a period is and how it's used, they had now begun to wonder about how it came to be and why it exists at all. They were ready to explore the function of periods and other punctuation at a deeper level, and I took full advantage of the opportunity. Over the next several weeks, we compared text excerpts written with and without punctuation, and the effects of each on readers trying to comprehend them; we noticed and explored the way punctuation is used in a variety of texts; and I invited the kids to try using punctuation marks they had never used before or in ways they had never tried before, and to share with the rest of us. As a result, many of them not only expanded their repertoire of punctuation use, but they began to use punctuation much more intentionally, bringing more clarity to their writing, and they began to gain more meaning from the texts they read as well. For these students, punctuation had become much more than a bunch of symbols; it had become theirs, to own and to use.

Punctuation is taught as part of every first-grade curriculum, so if we look at it from that standpoint, we could say I had met that requirement just by introducing it to them in the first place, and I could have left it at that. But I believe they gained much more by going into it so much further, and I also gained much more from listening to them. As with the ruler question, I've used some version of this "Who invented the period?" question with many other classes I've worked with in the years that followed.

On another occasion (with a different first-grade class), Aaron wondered aloud while working with a group in the block corner: "Who invented numbers?" This conversation ensued:

Jason: The factory made it with the machines.

Bret: He [Jason] means the page with numbers on it.

Aaron: Not by the factory. Who was the first to imagine numbers?

Nick: I think God made the numbers because God made everything except the houses.

Jason: I don't think so, because God just takes care of the dead people.

Bret: Then how did we get born? And how did our parents come?

Jessica: God makes us first, and then we grow older.

Samantha: But we're talking about numbers. God put numbers in their brain.

Aaron: God passed it on to everyone he knew and they told everyone else.

Keone: I think numbers came from China, because I know they invented fireworks so maybe they invented numbers.

Brian: I think the governor made numbers. He was the first one alive.

Susie: People was born and found work that said numbers and told to the whole world.

Samantha: They would think about how many animals or dinosaurs they killed.

Susie: How old they are and when their birthday is.

Brandy: They maybe had a little bit of stuff and wanted more.

Elena: For kids to learn.

As I listened, it seemed to me that the natural next step would be to investigate Aaron's question since so many of the kids had already become involved in his inquiry. So I took them to the school library to look for information about the origins of number systems, and we invited Neil Pateman, mathematics professor at the University of Hawai'i, to visit our classroom and talk with us further. As with the punctuation question, I was learning that kids think about things much more deeply than we often give them credit for, and that they're ready and eager to tackle questions of this nature. Are such questions important enough to spend time on, even if they're not "on the test"? That's something we need to decide for ourselves. Personally, I see these overheard conversations as gifts handed to us by our students. They're telling us what they want to learn; how can we pass up such opportunities and still call ourselves teachers?

The Unexpected Curriculum

Our students are truly our best teachers. They've helped me see that it's not enough to think of curriculum as simply covering material and teaching concepts, and this is the view of curriculum I'm sharing here. I'm not talking about scope and sequence charts, sets of ready-made lesson plans, or curriculum maps organized around pre-planned content areas, focused studies, or "essential" questions. There are already many resources available with that kind of information, and I find it useful to consult them for suggested learning engagements that might fit with my kids' inquiries. But planning for inquiry is not pre-planning for inquiry, and I hope to show the difference in this book. I want to offer a way to uncover the unexpected curriculum that can evolve as you consider kids' questions with a "what if?" frame of mind and with an acceptance

of the uncertainties that are a part of it. You can't know ahead of time which way it will go and you have to be okay with that. Harste says, "If inquiry is truly inquiry, it must be open. No one can predetermine the outcomes. This is really the difference between 'discovery learning' as a curricular model and inquiry" ("Inquiry-Based Instruction" 3). David and Phyllis Whiting agree: "We recognize inquiry not as a question or activity but as a perspective on learning that celebrates surprise, thrives on doubt, and flourishes in tension. . . . This is a productive tension that encourages us all to make connections and forge unforeseen possibilities. It is a tension that keeps us all young in heart and mind. It keeps us growing and learning" (*Inquiry at the Window* 143).

Inquiry-based planning is truly an inquiry in itself. By its very nature, it has to be. Just as an inquiry-based curriculum revolves around the questions of students, inquiry-based planning revolves around the questions of teachers as they consider their students' questions. It seems self-evident to me now, but it was only through reflecting on my planning process that I was able to come to that realization. And it was only through reflecting on that realization that I could begin to see more clearly the differences between this process and more traditional types of planning (see Figure 2.2).

As I plan for inquiry in my classroom, there are questions that continually drive my thinking and influence the decisions I make. Some of them are:

- How can I help my students to realize that they have questions and that their questions matter?
- How can I create a classroom environment that supports my students' inquiries without directing them?
- How can I help my students connect their inquiries to questions and issues of deeper personal and social significance?
- How can I help my students share their learning in interesting, relevant, authentic ways? But—how can I help them see that learning is the point, not giving a report or getting a grade?

The teacher's role in inquiry-based planning is considerable. You have to know learners, learning, and content, and you have to continually try to link these in ways that will enable your students to learn. "The role of the teacher in an inquiry-based curriculum is to possess not only expert knowledge about different disciplines but also expert knowledge about how learners learn" (Berghoff, Egawa, Harste, and Hoonan 87). It's a daunting task, but the good thing is that as you learn more about and with your students, you get better at it.

Traditional Planning	Inquiry-Based Planning
Starts with teacher-directed topics and lessons.	Starts with students' wonderings and wanting to know.
Organized by established disciplines, predetermined objectives.	Organized around questions of learners.
Teacher preplans unit so knows all steps ahead of time.	Because unit is not preplanned, teacher can't know all steps ahead of time.
Teacher selects all resources and activities.	Students have choice in selecting resources and activities.
Decisions about "what to do next" are made by writers of publishers' manuals.	Decisions about "what to do next" are made by teacher and students.
Teacher directs instruction, students follow.	Teacher supports and guides learning.
Covers only required curriculum.	Allows for unexpected curriculum.
Study is "finished" when topic covered.	New questions can keep inquiry going over time.

Figure 2.2. Traditional v. inquiry-based planning.

Getting Started: A Fishing Expedition

Teachers often ask me, "How do you know where to begin?" My answer is, "I don't know." You can't know where your students' interests lie if you don't know your students yet. So I start each school year with what I call a "fishing expedition." I watch, I listen, and I throw out bait based on what I see and hear. Sometimes I hook them right away, but most often, I have to keep trying for a while.

For example, I might overhear a question the kids are discussing among themselves, and I decide to throw that question back at them and see where it will lead. Sometimes, as with the punctuation or "Who invented numbers?" questions, we can take off immediately. But more often than not, the discussion will fall flat and I'll think to myself, "Well, that didn't go anywhere." Most of the time, that happens because the question had an answer that was simple and quick to obtain, such as, "What does the inside of a cocoa bean look like?" Once you have your answer, there's nowhere else to go with it—unless, of course, you happen to be someone who wants to know everything there is to know about chocolate. (If you're like me and many others, though, you're mostly content just to eat it.)

Some questions don't sustain the kids' interest for other reasons. Perhaps the topic just wasn't what they thought it would be, or the question didn't arise from a real inquiry in the first place. But that's okay. I think these false starts are unavoidable, and, in fact, they're necessary, both to get the process going and to give me an opportunity for trial-and-error insight into what makes each particular group tick.

Even when I do hit on something the kids seem interested in—the first nibble, so to speak—their first inquiries usually don't go far, maybe only lasting a day, an hour, or less. That's okay, too. It's the start of a process, one that may be new to them and that they have to try on for size. What I want is for them to begin to understand that their questions matter and deserve to be explored. The explorations themselves will grow in depth as the kids become comfortable with the process.

I want to make one thing very clear here, in case it's not obvious. While I'm fishing, learning is not standing still. We are engaged in a variety of planned curricular experiences, just as any other class would be. But throughout, I remain constantly on the lookout for that shining opportunity that will enable us to go deeper.

Back to the fishing expedition. Often, the questions we hear kids ask are not necessarily what they really want to know. Lindfors tells a wonderful story about her nine-year-old son. He had heard that the librarians in his community would answer questions by phone, and he was so amazed and curious that he wanted to try calling in a question himself. The question he decided to ask was, "How many teeth does a fox have?" However, when he expressed no further interest in foxes once his question was answered, Lindfors realized that he had used that question merely as a means of getting at his real inquiry. She explains: "He was indeed inquiring. His *question* was about foxes' teeth; his *inquiry* was about librarians (Do librarians answer questions?). He asked the one in order to find out about the other. How often we do this" (125). Reflecting on this and similar experiences, Lindfors began to question herself more about what that difference means to both learner and teacher: "The challenge is to hear through the words to the intention that lies behind them and gives birth to them" (64).

Kathy Short, Jerome Harste, and Carolyn Burke talk about the importance of taking the time to help learners find questions for inquiry. They believe that if students have ample time to explore topics and resources without feeling pressured to start "doing research" immediately, they will find their own connections and move beyond superficial questions to more focused, more significant inquiries (265).

One of the keys to fostering an inquiry-based curriculum is learning to recognize questions that are generative, that offer possibilities

for extended investigations and broader connections. It's not necessarily something we do naturally (I didn't), but with conscious effort, it can be learned (I'm still learning). It takes time, effort, patience, and perhaps a bit of luck to uncover learners' real inquiries, but expending that time and effort is critical to the process. There are no "right" or "wrong" inquiry questions. But there are all types of questions, ranging from trivial to profound. As teachers, we need to help kids think more deeply about their world so that their questions will become more and more thoughtful, and we need to develop in ourselves the ability to distinguish the surface inquiries from the underlying ones. But I think it's only through encouraging and developing our students' sense of wonder that any of this can happen. It's the act of wondering, not necessarily the specific questions they're initially asking, that establishes an inquiry mindset and gets the process going.

If you keep on fishing, eventually you'll get more than a nibble; you'll get a bite that will jolt you with its intensity. That's the one you'll want to try to follow (see Chapter 4 for one example). Sometimes, if you're lucky, that one question will take you further than you ever imagined—if you're not afraid to go with it and see where it leads you, even if you don't know ahead of time where that may be (and if it's a true inquiry, you can't know ahead of time). And you can learn how to go with it by asking yourself certain questions throughout the process. That's where having a framework for your observations and decision making can help. In the next chapter, I'll share my version of such a framework.

In today's educational climate of one-size-fits-all instruction, *Planning for Inquiry* shows you how to get an inquiry-based curriculum started, how to keep it going, and how to do so while remaining accountable to mandated curricula, standards, and programs. Diane Parker invites you into her classroom to think along with her as she provides an up-close look at the underlying structure of an inquiry-based approach, what such an approach might look like in practice, and how you can make it happen in your own classroom.

Supported by a wealth of stories and examples, Parker shares a practical yet non-prescriptive framework for developing curriculum from learners' questions and authentic classroom events. You will be able to adapt this framework for both short- and long-term planning with your own students.

Planning for Inquiry offers valuable information and much-needed moral support to those of us who believe that there is more to teaching than following a script, and that teachers, not programs, make a difference in the lives of children.

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