EXAMINING OUR BELIEFS AND PRACTICES THROUGH INQUIRY

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Inquiry is not merely using a "new" set of instructional practices, argue the authors. Rather, inquiry involves a theoretical shift in viewing curriculum, students, learning, and teaching.

Inquiry is a current "in" term among educators and a way to signal that your work is innovative and cutting edge. As always happens when a term achieves this kind of popularity, inquiry has come to have *many* different, often contradictory, meanings. The most common meaning seems to center on students engaging in research on their own topics or questions. When we initially heard the term, we wondered whether it was simply a slightly different twist on thematic units or actually represented a new approach. Our skepticism grew out of a long history in education of creating new labels for old ideas without any real change in classrooms and schools. We wanted to understand why inquiry had become a major focus and to examine whether it made a difference in beliefs and practices within classrooms.

We found it interesting that the emphasis on inquiry-based curriculum has occurred within the context of a strong teacher-research movement. This movement recognizes teachers as inquirers, decision makers, and creators of knowledge (Cochran-Smith & Lytle, 1993; Hubbard & Power, 1993). Perhaps as teachers use inquiry as a tool for their own learning and professional growth, they also become committed to creating classroom learning environments that support students in their inquiries.

In order to understand the current inquiry movement, we decided to examine the work that we and other teacher researchers and university researchers have engaged in over the last 10 years. As we analyzed the changes these inquiries have produced in classrooms, we particularly noted the role that beliefs and values play in our "knowing" and "doing" as teachers (Burke & Short, 1994). The presence, or lack, of congruence among beliefs, knowledge, and practice in the creation of curriculum told us a great deal about our own inquiry as well as about inquiry-based curriculum.

In this article, we first share several change stories about questions we and other educators have asked in classrooms over the last 10 years and how these questions relate to changes in our beliefs and practices. We then use these stories to examine the current focus on inquiry approaches to determine whether or not these approaches change what we do in schools or simply put a new label on what we are already doing.

Examining Our Beliefs and Actions

We believe that curriculum involves putting into action a system of beliefs (Short & Burke, 1990). Therefore, when we engage in inquiry about curriculum, we examine our beliefs as well as our actions in the classroom. In thinking about the changes in curriculum that we and other educators have made over the last 10 years, we realized that some of them involve changes in practice within the same paradigm of beliefs while others involve changes in practices and beliefs that move us into a new paradigm. Sometimes we use our current beliefs to develop further our teaching practices and the learning environments we are creating with students. Other times, we question our beliefs and make difficult changes in both our beliefs and our actions.

Inquiry and change for us often begin with a vague feeling of tension that we may not be able to articulate. Something isn't right, and we aren't quite sure what it is. Over time, we get a sense of what is bothering us, and that leads us to take some kind of action. What often happens, however, is that our first steps stay within the same paradigm of beliefs and lead to surface changes in our actions in the classroom. Although these first steps toward change are significant ones, they often do not go far enough. If we become self-satisfied with surface changes in our practices and stop searching

and asking questions, we are in danger of actually continuing the status quo which we think we are transforming.

In examining our shifts as educators, we realized that often we mistakenly view our initial changes in actions within the same paradigm of beliefs as substantive changes across paradigms. This misperception can prevent us from inquiring into and making the deeper and more substantial changes that are needed to transform ourselves and society. To continue our learning as educators, we had to interrogate our beliefs and practices and not assume we would ever have *the* answer.

Examining Educational Inquiry Through Change Stories

Educators always need to examine the congruence between their beliefs and actions in creating curriculum. To understand why these issues make a difference in educational inquiry, we share several stories that highlight changes in action within and across different paradigms of belief.

The first change story relates to the role of parents in the curriculum. When we began teaching, our role as teachers was reporting to parents through sending home report cards and announcements and inviting parents to come to school plays or assist on field trips. Our relationships with parents took the form of a professional reporting to an amateur. As teachers, we remained in control of the standards and the communication.

A recent shift that is fairly substantive in its physical form, but not in its function, is the move toward narrative report cards and more parent participation in actual classroom learning events. This shift has led to more authentic communication with parents. However, although practices have changed, the teacher remains in control as the professional who reports to the parents. The new approaches are more friendly and welcoming, but they remain within the same belief system.

For the paradigm to shift, the question asked by educators had to change from, "How do we communicate to parents?" to, "How can schooling be a collaborative venture among parents, teachers, and students?" This question assumes a three-way conversation in which parents are no longer outsiders who only receive reports about their child's learning. Teachers have opened these conversations by inviting parents to write letters introducing their child as a learner, by exchanging dialogue journals between the home and school, and by researching the funds of knowledge available in households to find ways to bring that knowledge into classrooms (Moll, 1992; Shockley, Michalove, & Allen, 1995). Children have become involved in the conversations through self-reflection portfolios and student-led conferences (Austin, 1994; Graves & Sunstein, 1992). This three-way conversation encourages shared responsibility and risk taking within the learning life of classrooms.

A second change story is related to reading instruction and the role of literature in school. The question of how to teach students to read and to ensure they comprehend what they read has dominated reading instruction. For many years, this question was answered through the use of basal readers, ability groups, round robin reading, workbooks, and an emphasis on sequential teaching of reading skills. The recent shift to literature-based reading programs has led to changes in materials and methods but not in the underlying beliefs about teaching children to read.

In many schools, basals have been replaced by literature anthologies and/or lists of children's books categorized by grade level. To make sure that students are comprehending, they are given assignments to write on open-ended questions in their literature logs. Ability groups have been replaced by whole-class discussions or heterogeneous literature groups, which are then followed by skills lessons and worksheets (Huck, 1996).

When we first began literature circles, we controlled student discussions by asking open-ended questions that determined what students considered significant in a book. Only later did we realize that, although we had moved away from discussions with one right answer, we still had preferred interpretations. Other teachers controlled the discussion through a cooperative learning format where responsibilities and roles were divided out among group members. Their students focused on following the "right" procedures and engaging in the "right" kind of talk instead of thinking together about their understandings.

When our question changed from, "How do we teach students to read and make sure they comprehend?" to. "How does literacy function as an inquiry tool in our lives?" we had to take a closer look at both our beliefs and actions. We could no longer separate learning to read from reading to learn. Literature discussion groups were not just a "better" way to teach reading, but a place where children use literacy as a tool for thinking critically about the world and their lives. We did not want students to readjust to get better at reading, but to pursue the significant questions and issues in their lives.

Instead of "making sure" that students comprehended according to our interpretation, we provided opportunities for readers to construct and explore their understandings with others through conversation and dialogue. Through collaborative inquiry in literature

circles, readers explored different perspectives and actually *thought* together-not just cooperatively worked together. Literature circles emphasized connection and critical thinking, not skills and strategies. Students had other opportunities to develop reading strategies through fluent reading and writing, and short, focused strategy lessons (Short & Harste, with Burke, 1995).

These are but two stories that illustrate different types of changes in educators' thinking and practices. The change story in writing instruction parallels the inquiries of educators in the above areas. In writing, the primary question had been, "How do we teach students to write?" When we began teaching, writing instruction involved grammar lessons, handwriting practice, and skills workbooks. Students were given a topic and a set of procedures or steps to follow to produce a particular piece of writing within a certain time span.

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Later, the key question became, "How can we support the authoring process in classrooms so writing becomes a tool for thinking and communicating?" This question led us to explore writing workshop (Graves, 1983): writer's notebooks (Calkins, 1990); and the authoring cycle (Harste & Short, with Burke, 1988) as curricular structures and engagements to support authors in constructing their own texts for authentic purposes.

Recently we have explored other sign systems such as music, art, movement, and mathematics as tools for thinking and communicating in schools (Short & Harste, with Burke, 1995). Our actions are based on our assumption that these explorations are within the same belief system as those that we use to think about authoring and writing. We assume that the same universal processes of creating and sharing meaning underlie all sign systems, and so we can take what we know about language and use those understandings to comprehend other sign systems, and vice versa. Although we have made this assumption in order to move ahead with our inquiry. we are aware that our work with sign systems may involve a move to another belief system at some point.

Examining Our Beliefs About Inquiry

The final change story we want to share involves inquiry-based curriculum. The question that has dominated educators' inquiries about content area teaching has been, "How do we cover the content of the subject areas?" When we were students, the content was covered through facts that we learned through assigned textbook readings; tests of our ability to memorize facts, dates, and formulas: and research reports copied from encyclopedias. We covered lots of topics and memorized many facts that were forgotten the day after the test. We ended up with superficial knowledge and no desire to keep learning in these areas-we were *done* with that topic.

Our frustrations with textbook approaches to content areas led us as teachers to explore thematic units. The emphasis on facts was replaced with activities that were part of units on topics such as dinosaurs, China, or the Civil War. These activities were sometimes aimed at particular facts and concepts, and other times they were simply fun engagements. Our thematic units were more interesting and engaging for students and allowed us to replace the textbook with well-written fiction and nonfiction.

When we looked more closely, however, we realized that we were asking the same question of how to cover the content of the different subject areas. We were still covering topics and supplying facts, just in more interesting ways. Students no longer memorized facts: instead they gathered facts and engaged in activities that we planned for them. We often felt as though students were doing activities for the sake of activity and at the expense of critical and in-depth knowing of larger conceptual issues (Bang-Jensen, 1995). Even though students had more choice, they were limited by our own knowledge of the topic. The class stayed safely within what we already knew, and students were supposed to "discover" what experts already knew about the topic. We still developed the curriculum and delivered it to kids just in a more attractive package. Although our goal was integrated curriculum, when we looked closely we saw that our units compartmentalized knowledge by subject area and concepts and that, at best. we had a correlated curriculum.

The tensions we felt in our use of thematic units remained vague until we realized that we had changed our actions but not our belief systems. Our movement

away from believing that we needed to "cover" topics began when we examined the ways in which we go about learning and inquiry in our own lives outside of school. Just as assumptions about reading and writing

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changed once researchers looked at how people actually read and write (Goodman, 1967; Graves, 1983), so our beliefs were challenged once we asked ourselves how we live as inquirers in the world.

Curriculum as Inquiry

One of our first insights was that inquiry is a process of both problem posing and problem solving (Freire, 1985). Inquiry involves immersing one's self in a topic and having *time* to explore that topic in order to find questions that are significant to the learner and then systematically investigating those questions. In schools, research usually begins with a question. Students are immediately asked to identify what they know and what they want to know in a unit, and so they quickly choose a topic about which they gather facts.

Students gather interesting facts, but they are not pushed to consider questions of broader and deeper significance in their lives because there is no time to explore and find those questions. We know from our own inquiry that finding the question is often the most difficult aspect of our research and occurs quite late in

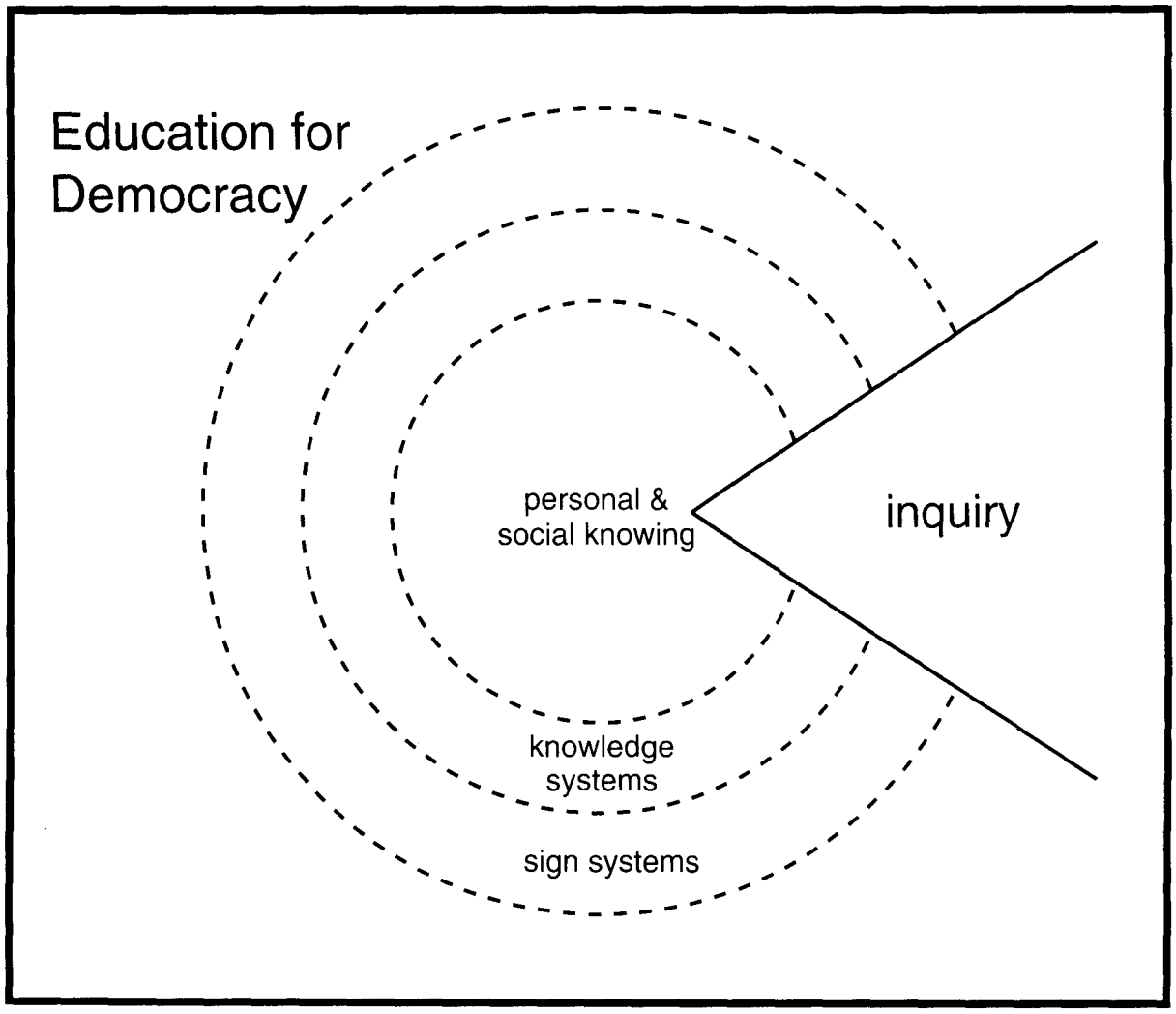

Figure 1. Curriculum as Inquiry (Short, 1993)

the process. We begin with an interest, issue, or tension that we explore; but the specific question grows out of that exploration-it does not proceed it.

As Figure 1 depicts, curriculum as inquiry moves from a major focus on facts or activities to inquiry itself as its smallest unit. Inquiry is a whole process that cuts across three knowledge sources (Harste, 1993). At the heart of inquiry is personal and social knowing-the knowledge that learners bring from their personal experiences of living in the world and being part of specific cultural groups and social contexts. Inquiry can only begin with what learners already know, perceive, and feel.

The second knowledge source is the knowledge system-for example, history, biology, and economics—that humans use to structure knowledge to make sense of the world. These knowledge systems are human inventions with arbitrary divisions that came about because scholars shared a set of questions and a domain of intellectual inquiry. In the content areas, these knowledge systems are often taught as separate areas that are reduced to specific sets of facts and skills. From an inquiry perspective, what is significant is not a particular body of knowledge but the perspectives that each knowledge system offers for looking at the world. Each system provides a different lens or set of questions for examining the world, different ways of researching, and tools for going about that research.

Instead of teaching each area separately through science or social studies units, inquiry brings multiple perspectives from many knowledge systems to an issue or topic. For example, when primary grade students in Jean Schroeder's classroom became interested in "bugs," they examined insects through the perspective of an historian, a paleontologist, an entomologist, and an agriculturalist. Each perspective allowed them to ask a different set of questions about insects and to explore different methods and tools of research. They developed a more complex conceptual understanding about insects than if they had limited themselves to collecting scientific facts.

The third knowledge source is sign systems, which are alternative ways of creating and communicating meaning, such as language, mathematics, music, art, movement, and drama (Eisner, 1982; Leland & Harste, 1994). These systems are basic ways of making and sharing meaning, but each allows learners to know and communicate different meanings. When learners are unable to use a particular system, there are understandings about the world that they can never know or communicate to others. Traditionally in schools, language has been emphasized; art, music, and movement have been treated as frills; and mathematics has been reduced to a set of computations.

Outside of school, learners commonly use multiple sign systems simultaneously. In schools, each system is often taught separately at different times of the day. Inquiry involves having all signs systems available at any point in time so that students can use the ones that best meet their own purposes (Berghoff, 1993; Clyde, 1994). Thus, we question the exclusive emphasis of writing workshop on students constructing meaning through language and wonder about a studio time where students have multiple sign systems available.

Using multiple sign systems does not mean simply adding an art activity or a song about the topic to the curriculum. Just as educators believe that reading and writing need to be woven throughout students' explorations, so do the other sign systems. As part of the resources they examine on a topic, students not only need books but also other texts, such as art prints, pieces of music, and videotapes of dances or dramas. As they observe, interview, and read, they can use writing, sketching, improvisational drama, graphing, and charting to think and record what they are exploring.

Inquiry involves a major shift in thinking for us as educators. Instead of using the theme as an excuse to teach science, social studies, mathematics, or reading, knowledge systems and sign systems are tools for exploring and researching students' own questions. The major focus is inquiry itself, not the traditional content area distinctions. Even integrated curriculum approaches are based around content areas as the center of curriculum-the assumption is they just need to be integrated more.

The particular classroom context that supports inquiry is one of education for democracy (Edelsky, 1994). Inquiry is theoretically based in collaborative relationships, not the hierarchies of control so common in most schools. Shannon (1993) defines a democracy as a system in which people participate meaningfully in the decisions that affect their lives. It involves participation and negotiation among equals where participants are not just given the choice among options determined by others behind the scenes, but are part of the thinking behind the scenes.

Through inquiry, students come to new understandings that are temporary, not to final answers. They don't cover a topic; they begin a lifelong inquiry. We believe that progress in inquiry involves asking new questions because understandings last only until we have time to ask new questions and until more compelling theories come into existence (Short & Burke, 1990). We don't inquire to eliminate alternatives, but to find more functional understandings, create diversity, and broaden our thinking.

Inquiry questions can't be framed ahead of time by teachers or curriculum experts. Students have to be part of creating the questions. Dewey (1938) argues that the role of the teacher is to establish an environment and provide experiences that have the most *potential* for presenting anomalies for a particular group of students. But the questions and the curriculum itself are negotiated *with* students.

The Shift From Thematic Units to Inquiry

The shift from textbook approaches to thematic units involved a major investment of time and effort gathering materials, books, and activities for these units. Our classrooms looked and felt different. Students no longer sat in rows, quietly filling out worksheets, but busily moved around the classroom engaged in conversations, reading books, and doing hands-on activities. The shift from thematic units to curriculum as inquiry has been a more subtle change because the classroom often looks similar on the surface. Many of the same materials and activities are often present, but they are used for different purposes and within a different theoretical frame.

For example, when Kathy taught a thematic unit on the ocean to first graders, she pulled together science experiments, sea shells, art activities, movies, and books. Students were led through a series of activities where everyone did the same science experiment, made a fish for a class mural, created a watercolor wash of ocean life, and listened to read-aloud books about the ocean. Toward the end of the unit, Kathy asked each student to choose a sea creature to research. Students collected facts on their animal and put these into fish-shaped books for the classroom library. The unit ended as Kathy boxed up the materials and books until the following year.

In contrast, Kathleen Crawford's first- and second-grade students in Tucson, Arizona, began an inquiry on the ocean because several students visited San Diego, California, and came back with stories about a huge body of water that seemed impossible to children who had spent their lives in the desert. Their interest led Kathleen to pull out many of the same books, movies, experiments, and sea shells that Kathy used, but she also added musical pieces and art prints and had children bring in their resources. These materials became exploration centers that children used to tell stories about their own experiences and to explore and learn about the ocean. Kathleen's goal was not to "teach" a certain body of knowledge but to provide students with many resources and perspectives on the ocean so they could develop new understandings and gradually find questions that they wanted to pursue. As students shared in class meetings following their exploration times, their questions and "wonderings" were recorded on a chart. After several weeks, the class returned to the chart and selected the questions that were most significant to them. These significant questions were the basis for inquiry groups on why oceans have waves, the differences between mollusks and jellyfish, the teeth and jaw structures of sharks, and keeping the ocean clean. Students read, examined art prints, talked to others, and recorded their research using charts, diagrams, journals, and graphs. Each group then presented their understandings to classmates through multiple sign systems. Although the presentations signalled the end of the class focus on the ocean, students still had many questions. The books remained in the classroom, and children continued their explorations of the ocean through personal inquiries during their writing and reading workshop time.

The differences between experiences with thematic units and with inquiry convinced us that this shift is a change in beliefs, not just practice. We find this shift a much more difficult change that requires constant examination, observation, and dialogue with students and other educators. Inquiry involves not only building curriculum *from* students but also negotiating curriculum *with* students. Some of our initial explorations of negotiating curriculum with students in elementary classrooms are described in Copenhaver (1993); Crawford, Ferguson, Kauffman, Laird, Schroeder, and Short (1994); Short and Armstrong (1993); and Short and Harste, with Burke (1995).

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Taking Control of Our Inquiry as Educators

These change stories about our inquiries as educators are not meant to reflect an either/or position of wrong-versus-right approaches to curriculum. We do not believe that we have "arrived" at some kind of superior understanding because we know that our understandings are always in process. We also do not accept the deficit view that educators must make changes in their teaching because something is wrong with that teaching. Change is the result of continuous inquiry as educators—we view ourselves and other teachers as professional learners.

For us, these change stories reflect the examination and transformation of beliefs and actions that are a constant part of our lives as teachers and learners. These

stories are a reminder that we need to examine critically *both* our beliefs and actions. We need to pay attention to the tensions that we feel about our teaching and take time to explore them. Although most of our inquiry involves exploring new actions based on current beliefs, we remain open to the possibility that we may also need to make a major leap to a new paradigm.

These change stories also point out the tremendous forces exerted by the publishing industry, much of educational research, and existing school structures to reform curriculum in ways that do not fundamentally change schooling. These forces work hard to convince educators that adding a few new practices or new materials constitutes substantial change and reform in schools. Writing workshop is thus reduced to a set of precise steps for "how to do the writing process." Literature approaches become a new set of literature anthologies with literature logs (workbooks in disguise). Literature circles are simply a replacement for ability groups and a better way to teach reading rather than collaborative inquiry on life itself. Inquiry-based curriculum is reduced to asking students what they want to study and setting up a sequence of research steps while still maintaining the dominance of traditional subject areas.

These forces make it easy to maintain the status quo, and they can convince us that we do not need to examine critically and question our beliefs as well as our practices. As educators, we need to have control of our inquiry so that we can ask the questions that really matter in our lives, just as students need to ask questions that are significant in their lives.

We are, and should be, incredibly nervous about inquiry. We have come to believe that curriculum as inquiry fundamentally questions how schooling is done. It changes our relationships with students, families, the community, other educators, and society. It changes how we view knowledge and the role of content and process in thinking and schools. It encourages learners to examine the complexity of issues instead of trying to find simple solutions to complex problems (Harste, 1993). Curriculum as inquiry is not just a better way to enhance student learning-it is an attempt to construct learning contexts that advance our society's democratic mission.

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