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Teachers as Reflective Practitioners: Examining Teacher Stories of Curricular Change in a 4th Grade Classroom

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This article describes findings from a classroom-based action research project conducted by two in-school teachers, a literacy coach and a 4th grade teacher, implementing a new integrated literacy and social studies curriculum and the changes they made in curricular practices and beliefs over a three-year period of time. A university professor also served as an out-of-school researcher assisting with analyzing data, describing findings, and discussing implications. The project was based on the model of teacher as researcher asking two focused inquiry questions: 1) what can be learned about teaching by taking a reflective practitioner perspective as a way to think about our own teaching? and 2) what can be learned about curriculum and curriculum development from collaboratively implementing an integrated literacy and social studies curriculum in a 4th grade classroom? Research methods were grounded in principles of naturalistic inquiry and data collection and data analysis were driven by the methodology of grounded theory. Three stories of curricular change were constructed from the data. These stories illustrate how study reflected on and changed their practices about curriculum and curriculum development over time. Findings and implications indicate thinking more broadly and more deeply about curriculum and curriculum development.
As educators, we cannot make decisions about what we need to change if we do not step back and examine what we do (Barry, 1997, p. 524).

Teachers learn by doing, reading, and reflecting (just as students do); by collaborating with other teachers; by looking closely at students and their work; and by sharing what they see. This kind of learning enables teachers to make the leap from theory to accomplished practice. In addition to a powerful base of theoretical knowledge, such learning requires settings that support teacher inquiry and collaboration and strategies grounded in teachers’ questions and concerns (Darling-Hammond & McLaughlin, 1995, p. 598).

Introduction

Teaching is an act of thoughtfulness (Barell, 1995). That is, teaching means being continuously thoughtful about how to support the learning of others, as well as our own (Short, Harste, & Burke, 1997; Fisher, 1995). Thoughtful teachers engage in reflective practice as a way to think about their teaching and about ways to continually develop and implement curriculum that is personally meaningful and culturally relevant to students (Allington, 2002).

Co-authors William, university professor, and Jill, literacy coach, valued the model of teacher as reflective practitioner and currently collaborate with a variety of teachers who value it as well. Our work with them focuses on describing and understanding the problems and pleasures teachers, who are intentionally thoughtful about their teaching, experience in the classroom. This article describes findings from a classroom-based action research project conducted by two teachers while implementing a new integrated literacy and social studies curriculum and the changes they made in curricular practices and beliefs over time. This project was based on the model of teacher as researcher (Short, Harste, & Burke, 1996; Patterson, Santa, Short, & Smith, 1993; Patterson, Stansell, & Lee, 1990) and focused on two inquiry questions asked by the teachers: 1) what can be learned about teaching by taking a reflective practitioner perspective as a way to think about our own teaching? and 2)
what can be learned about curriculum and curriculum development by collaboratively implementing an integrated literacy and social studies curriculum in a 4th grade classroom?

We begin by situating this project within a larger conceptual framework grounded in the history of curriculum. Next, we identify different types of curriculum that have evolved over the past century. Then, we identify the conception of curriculum used in this project, *Curriculum as Belief System*, and situate it within a larger historical context of curriculum thought and practice. Next, we identify project participants and data sources and describe data collection and data analysis procedures. Then, we share three teacher stories of curricular change that illustrate how Jill and Sally (pseudonym), a 4th grade teacher, changed their practices and beliefs about curriculum and curriculum development over time. Finally, we discuss findings from these stories and discuss implications for thinking more deeply about curriculum and curriculum development.

**Background**

Almost all educational problems of any importance are problems that have a history, that have been addressed in the past, and that have import for the current state of affairs in education (Eisner, 1992, p. 30).

Historically, defining curriculum has been problematic in education. Much of the problem is that the meaning of the term has never been able to shake off its etymology (Austin, 1970). Originally, curriculum derives from the Latin word *currere*, meaning "the course to be run." This definition has a rich history and continues to significantly influence the field of curriculum. And yet, a review of the history of curriculum thought and practice suggests that curriculum has never had a uniform and monolithic definition (Bintz, 1995). A multiplicity of definitions has always existed, each one representing a complex value statement (Cremin, 1971) "consisting of practices and ideas that represent ways of addressing oneself to questions like what should be taught and why" (Kliebard, 1976, p. 245). Figure 1 illustrates a sample of multiple definitions.
Figure 1. Conceptions and Definitions of Curriculum

<table>
<thead>
<tr>
<th>Conception</th>
<th>Definition of Curriculum</th>
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| As lived experience               | 1) Experience going on in school. It’s content is identical to the content of the actual experience of the learners (Taba, 1932)  
2) The totality of student experiences in school, planned and unplanned (Tyler, 1975)  
3) A narrative of experience; a person’s life experience (Connelly & Clandinin, 1988) |
| As preparation for life           | 4) The way in which the school aids boys and girls to improve their daily living (Hopkins, 1936).  
5) A succession of experiences giving the learner that development most helpful in meeting life situations (Seguel, 1966)  
6) An expression of a covenant between the schools and society (Stenhouse, 1983). |
| As system or plan                 | 7) A series of plans expressive of the educational purposes of policy-makers on behalf of a specified group of learners (Snedden, 1927).  
8) The system within which decisions are made about what the curriculum will be and how it will be implemented (Beauchamp, 1961)  
9) The plans made for guiding learning in schools represented in retrievable documents of several levels of generality, and the implementation of those plans in the classroom (Glatthorn, 1987). |
| As course of study                | 10) The course of study which presents for the teacher the leanings which children should attain in her care (Melvin, 1931)  
11) A group of fields of study arranged in a particular sequence (Caswell & Campbell, 1935)  
12) A course of studies (Goodlad, Klein, & Tye, 1979) |
| As content                        | 13) Content that is to be employed in instruction, including the selection and arrangement of subjects, as well as the selection and arrangement of content in these subjects (Caswell & Campbell, 1935)  
14) Formal subject matter (facts, processes, principles) set out to be learned (Sequel, 1966)  
15) Course content in the form of data or information recorded in guides or textbooks (Tyler, 1975). |
### Teachers as Reflective Practitioners

#### Conception of Curriculum

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<th>Definition of Curriculum</th>
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<tr>
<td>16) It is everything that the students and their teachers do, the activities, the things done, and the materials with which they are done (Rugg, 1926)</td>
</tr>
<tr>
<td>17) The pupil activities and the materials of instruction that arouse them (Sequel, 1966)</td>
</tr>
<tr>
<td>18) What students have an opportunity to learn in school, through both the overt and hidden curriculum, and what they do not have an opportunity to learn because certain matters were included in the curriculum (McCutcheon, 1982)</td>
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<tr>
<th>Definition of Curriculum</th>
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<tr>
<td>19) All the experiences children have under the guidance of teachers (Caswell &amp; Campbell, 1935)</td>
</tr>
<tr>
<td>20) Pedagogical directives, intended to provide assistance, advice, suggestions, and information to assist the teachers in carrying out his task successfully (Dottrens, 1962)</td>
</tr>
<tr>
<td>21) A set of intended learnings (McCutcheon, 1982)</td>
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<th>Definition of Curriculum</th>
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<td>22) A set of beliefs about how people learn, and the classroom contexts that best support that learning (Short &amp; Burke, 1991)</td>
</tr>
<tr>
<td>23) Curriculum evolves out of the transaction between a paper curriculum, an enacted curriculum, and an envisioned curriculum—a triadic relationship that is dynamic, ongoing, and represents a shared process between teachers and students working together through negotiation (Short &amp; Burke, 1991)</td>
</tr>
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Given this history it is ironic that continued attempts to define curriculum over the years have created significantly more, not considerably less, of what Hazlitt (1979) has termed “chronic definitional ambiguity.” Today, more than ever before, the curriculum field is replete with many different curricularists who use different definitions and discourses to think and talk about curriculum. These different definitions and discourses have created a proliferation of different types of curriculum.

### Types of Curriculum

Different definitions reflect different types of curriculum (Weisz, 1989). The following is a partial list (Glatthorn, 1987):
social curriculum (the social interactions and practices occurring in classrooms);
recommended curriculum (the ideal curriculum consisting of basic competencies acquired through academic subjects developed by scholars or committees of subject specialists);
written curriculum (a document consisting of scope and sequence charts, curriculum guides, etc.);
mastery curriculum (a subdivision of the written curriculum in that it specified knowledge deemed essential to all students, and inculcated through carefully sequenced and highly structured objectives);
organic curriculum (a curriculum that contains essential knowledge, but doesn’t require tightly structured organization, focused teaching, and detailed evaluation);
taught curriculum (the curriculum that teachers end up teaching, i.e. the observable curriculum); and
supported curriculum (the resources (texts, time space, staff) provided to support curriculum implementation or delivery).

This list suggests that reaching any consensus about a common definition of curriculum remains, as it has for almost a century, one of the most fundamental conceptual problems in the field (Kliebard, 1989). It also indicates that many perspectives are used to understand the nature of curriculum. In the following section we discuss Curriculum as Belief System, describing it as one perspective on curriculum and the one we used as a conceptual lens to analyze data from this inquiry project.

Curriculum as Belief System

Historically much research has been conducted on curriculum as lived experience, content, activity or opportunity, preparation for life, system or plan, course of study, and tool for guiding teacher decision-making (Figure 1). Less research, however, has been conducted on curriculum as belief system. This is partially due to the fact that the notion of curriculum as belief system is a radical departure from traditional views of curriculum. This perspective defines curriculum as "a set of beliefs about how people learn, and the classroom contexts that best support that learning" (Short & Burke, 1991, p. 6), and curriculum
development as the process of teachers putting these beliefs into action through the construction of curricular frameworks. These frameworks are organizational devices which enable teachers to create curriculum, implement instruction, collect assessment data in the form of anecdotal records, vignettes, and other "kidwatching" (Goodman, 1978) strategies, and reflect on these data in order to make more informed curricular decisions. The phrase "more informed" (Short, K., Harste, J., with Burke, C., 1996) means teachers using children as informants to constantly create and revise curricular engagements, instructional strategies, and assessment procedures so they reflect the best we currently know about how people learn (Harste, 1986; Harste, Short, & Burke, 1988). Simply stated, curricular frameworks help teachers connect what they believe and what they practice (Short, 1997).

Curriculum as belief system is grounded in research on teacher thinking (Clark, 1988; Brousseau, Book, & Byers, 1988; Fang, 1996). Jackson (1968) was one of the first to study the thought processes of teachers, and the relationship between teacher thinking and teacher instruction. He documented that how and what teachers think about significantly influences their instructional effectiveness. Similarly, Gove (1981) found that teacher thinking and teacher behavior are guided by an organized set of beliefs or theories which are often implicit, as did Nespor (1987, p. 323) who found that "to understand teaching from teachers' perspectives we have to understand the beliefs with which they define their work."

Curriculum as belief system is also rooted in literacy education, particularly reading education. Research indicates that teacher-decision-making is influenced by personally held belief systems (Harste & Burke, 1977; Harste & Burke, 1980; Richardson, Anders, Tidwell, & Lloyd, 1991; Sturtevant, 1996). Specifically, what students and teachers believe about literacy and literacy development powerfully affects teaching and learning in the classroom (Goodman, Watson, & Burke, 1987). In reading education, belief systems are often characterized as theoretical orientations (DeFord, 1985). These orientations are systems of knowledge that control expectations and daily decision making; they are based on deep philosophical principles that guide teachers in making decisions about reading instruction. Harste & Burke (1980) found that
both teachers and learners hold particular and identifiable theoretical orientations about reading which in turn significantly effect expectancies, goals, behavior, and outcomes at all levels. Similarly, Reutzel & Sabey (1996) found that teachers’ theoretical orientations about literacy, especially reading, are generally aligned with classroom practices.

At this point it might be helpful to ask: How is curriculum as belief system an alternative from, say, curriculum as preparation for life and curriculum as a fixed course of study? A major difference is that they ask very different curricular questions. For example, curriculum as preparation for life might ask: How do we as teachers prepare students for the workplace? And curriculum as course of study might ask: How can we as teachers identify and teach the facts, processes, and principles in a given content area that students should know? Curriculum as belief system, however, asks questions like:

- What do we currently understand about natural learners?;
- What contexts best support and enhance natural learners?;
- How do natural learners gain and maintain perspective on their learning?; and
- What understandings are learners constructing out of classroom experiences? (Short & Burke, 1991).

Central to this perspective is the belief that curriculum does not consist of hierarchically arranged scope and sequence charts, or teacher, school, and state curriculum guides developed by curriculum specialists and implemented by teachers. Rather, curriculum evolves out of the transaction between a paper curriculum (beliefs about how people learn, and classroom contexts that best support learning) an enacted curriculum (actual learning engagements which reflect those beliefs and occur both in and outside classrooms), and an envisioned curriculum (potential new curriculum based on student and teacher reflections of learning engagements) (Short & Burke, 1991). This triadic relationship is dynamic and ongoing, and represents a shared process between teachers and students working together through negotiation. Similarly, curricular change occurs when teachers change their beliefs and shift their instructional practices based on what they are constantly learning from observations of and conversations with students.
Given this historical and conceptual background, in the following section we identify the project method, as well as describe participants, data sources, and data collection and data analysis procedures involved in this teacher inquiry project.

Method

**Participants.** A total of three educators participated in this project: Sally, (pseudonym), a four grade teacher in a school district located in a large Midwestern city; Jill, co-author and reading and writing specialist working as a literacy coach across the curriculum at the same elementary school. Sally and Jill collaborated because they shared common interests including the reading and writing connection and literature-based reading and writing instruction. Most importantly, they shared an interest in thinking about their own teaching from a teacher as reflective practitioner point of view. The third participant, William, co-author and a university professor in literacy education at a large Midwestern university, participated as an out-of-school researcher assisting with analyzing data, describing findings and implications.

**Data Sources.** This project included three data sources: 1) Jill and Sally recording ongoing classroom observations, 2) Jill and Sally conducting ongoing reflective conversations in debriefing sessions, and 3) Jill and Sally sharing a journal. The journal consisted of notes Jill recorded and shared with Sally in debriefing sessions about their collaborative teaching based on classroom observations and reflective conversations with each other. These conversations focused on the question: “What are we learning about ourselves as teachers?”

**Data Collection.** Jill and Sally worked together for three years. During this time, they planned, implemented, and assessed a variety of classroom projects. Jill worked in Sally’s room on average twice a week. Typically, Jill was in the classroom for approximately sixty to ninety minutes each session. In addition, they met for approximately twenty minutes in Sally’s room to debrief, reflect and plan. These debriefing sessions centered around focused inquiry questions such as, “I think today went really well, what did you think?”; “Where are we going next?” While talking, Jill recorded reflective and planning notes in the
journal. These entries were used to guide follow-up conversations between the two.

Data Analysis. Data-analysis was grounded in principles of naturalistic inquiry (Lincoln & Guba, 1985) and driven by the methodology of grounded theory (Glaser & Strauss, 1967; Glaser, 1978). Sally and Jill used the following questions to guide data analysis: 1) what are we learning about ourselves as teachers? and 2) what are we learning about curriculum and curriculum development by implementing an integrated literacy and social studies curriculum? Jill wrote results of this analysis for each year in narrative form and afterwards shared them with Sally for her feedback on accuracy, clarity, and revision. Based on this feedback, Jill wrote the following narratives intentionally in the first person in order to capture and describe her and Sally’s personal and collaborative stories of curricular change.

Teacher Stories of Curricular Change

Year 1

The district had adopted a new curriculum guide for reading and language designed to allow teachers with a literature-based philosophy to have freedom. The objective regarding research in the new curriculum guide simply stated that students needed to experience the research process. The fourth graders needed to read and learn about their state history so we decided to invite students to read and research Ohio history. Sally and I sat and brainstormed 26 topics related to Ohio history that we believed would be motivating to students. Sally thought we should use the Ohio History textbook, but that we would need additional resources so students could explore their topics more thoroughly. After school, we searched through newspapers, magazines, and old history textbooks. Lucky for us, it was a bicentennial year for our city an we had access to some recently published written recounts of the past. We gathered everything we could find and grouped the information by topic.

The next day we announced to the students that everyone in the class was going to become an expert on one particular aspect of Ohio history. We explained that after reading about a topic and writing about
it, each person would share what was learned with everyone else and we would all become experts on many things in Ohio history when we finished. We talked about steamboats, Marietta, Indian mounds, Tecumseh, Garfield, canals, and more. As Sally read the 26 topics we had identified for students to choose from, I wrote the topics on the board. After each student selected one topic to research, we selected one, too. Sally and I believe that the teacher should participate in the research with the students. By doing the same work the students do, we demonstrated that we were readers and writers, too, and that it was important for all of us to be learners. Experiencing the work with the students would also enable us to feel what was working and if changes needed to be made to better facilitate learning.

To begin, we asked students to list all they knew about their selected topics and what other things they wanted to know about them. Even though students had been asking questions all of their lives, they had not been asking questions as a way of wondering, at least at school. Students had a hard time deciding what they wanted to know further about the topic, so Sally and I divided the class in half so that each student could be met with in an individual conference. One student, for example, could not think of anything he wanted to know about barges so we made suggestions. We asked: do you want to know what a barge looks like? do you wonder what barges were used for? are you curious about how barges helped Ohio? As we talked, students wrote down our questions.

Sally and I gave students photocopied sections of text relating to their topics to read and invited them to find and use other sources of information, including interviews with grandparents and museum curators, films, etc.

All the while, Sally and I did whole class minilessons at the start of each class session on aspects of the research process. We did minilessons on how to find relevant information, how to make note cards, how to put information in "your own words," how to create bibliography, and so on. In a ten minute attention-getting minilesson, I demonstrated how I put information I was reading about into my own words. I read a paragraph from an encyclopedia, stopped, closed the book and then wrote out the
information on a giant sized note card I had made so all students could see. Then, I continued reading another paragraph, stopped, closed the book and put the text into my own words once more. Finally, I read another paragraph, closed the book and invited students in the classroom to put the text into their own words.

Sally and I held conferences with students all during the writing process. We looked over their note cards to see if they were gathering enough information on the topics and if they were putting the information they read into their own words. We met with students over rough drafts to help them write clearly and write enough to satisfy their research questions. Sally and I did final editing of students drafts after students checked for meaning, spelling and punctuation individually and in peer conferences. Students read their final drafts to each other one at a time in front of the classroom. As they finished, students turned their papers in to Sally and me for grades. Points were awarded for writing note cards, making a rough draft and a final draft. We all agreed we had learned a lot about Ohio history.

I made a few reflective notes to help me remember what worked and what did not.

Year 2

Sally and I remembered our students' lack of enthusiasm, and the skimpy, boring papers they wrote. We felt our students would become more involved in the research process if the subject they were researching could be more exciting to them so we selected endangered animals for study. We went on a book search and checked out books from three different libraries in the area. There were books on tigers, gorillas, grizzlies, pandas, and so on. Based on the resources available, we created a topic choice list and invited students to select an animal to investigate from the list.

We wanted students to really own the topic, so we allowed them to double up with a partner or we let one student research the same animal as another. They could make additions and substitutions to the list. We gave them voice in their choice rather than match students to animals
listed on the board. If students did share a topic or partner up on their research, we gave them the responsibility of determining how to share the reading materials as well as the workload. They could collaborate on drafts or do individual reports. The room buzzed with excitement as students set about their work. Sally and I heard students reading to each other and observed them pointing to pictures and sharing captions of information from the pages.

After three reading workshop sessions, students excitedly created webs and easily recorded knowledge of their selected animals when we asked them to share what they knew. We felt we had successfully immersed them in print and had given them sufficient time to wonder about the animals they had been reading and talking about. Sally and I began to hold conferences. In our conferences we asked the students to tell us three things they wanted to know about their selected animals that they did not already know. Because our students were so invested, we were quickly surprised when we found it difficult for students to jot down or even orally compose three questions as they sat with one or the other of us. Sally and I began to offer assistance. We would ask, “Do you want to know what your animal eats?” “Are you interested in knowing your animal’s life span?” “Would it be interesting to find out why your animal is on the endangered list?” The same as last year, we felt like we were putting words in students’ mouths and questions on their papers. There was lots of uneasiness about how our conferencing was going, but we had to help students determine questions so they could move forward and begin reading to research and write what they learned.

We referred to our lesson plans from the year before and repeated many of the same minilessons we had done during last year’s research unit. We felt that the minilesson on how to put information in “your own words” was very important to the research process so I demonstrated once more how I read a section, close the book, say in my own words what I just read, and write it on a note card. We added a minilesson on how to work together since we could see the need. Some twosomes were not sharing the work so Sally and I pretended and role-played a student scene. She put a big bow in her hair and I wore a baseball cap. I sat back and doodled on my paper while Sally did all the reading and note taking. Sally sighed and told me that it was not fair for her to do all the work.
She asked me if I would take a turn taking notes if she would read so we both could hear. Together we negotiated the work and shared the assignment so students could see ways readers and writers can collaborate on assignments. Because we felt we created more confusion than what it was worth last year when we tried to show our students how to write bibliographic data, we omitted the minilesson on how to write a bibliography.

Sally and I tried to help students be successful and complete their research reports on time. We created deadlines for note cards and finish lines for rough drafts. To help students keep track of their knowledge and facilitate their writing, we invited students on two occasions to pick a friend in the room and write a letter to the friend telling the classmate all they knew about the animal they were studying. These fun and quick writings helped students organize their ideas for their research reports and discover what else they needed to know. Students, also, held peer conferences and served to help each other revise and move toward final drafts and finished research reports.

When final drafts were finished, students shared their reports in an open read-in and then, stored them with other final drafts in their portfolios. When assessments were to be made, students were invited to choose the piece they wanted to be evaluated from several final drafts they had collected in their writing folders. On a monthly basis, students selected a draft from their portfolios to be evaluated for content, clarity, and flow. Sally and I determined the scores and wrote individual notes to each student expressing our feelings about various aspects of the writing. We wrote to each student telling about several things we liked about the research report, and in an effort to encourage future writing, we never offered more than one suggestion to each student for improvement.

Year 3

Sally and I had been reading and talking about using text sets and decided to explore this as a way of introducing the research unit this year. We still believed that students would be more involved in their reading and writing if they were studying something of interest to them. Sally and I decided her class, like any class, would turn on to dinosaurs.
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We selected two books on the theme and read them aloud to students. One day Sally read, *Life Story* (Burton, 1962), and I read, *Digging Up Dinosaurs* (Aliki, 1988). We simply read. We did not review or ask students questions regarding the text. Upon completing the second book, we asked students to think about the information in the two books and asked, “Where can you go from here?” For a few moments, there was silence, but then students began to volunteer ideas and we began to interconnect them in a web on the board. They listed Egypt, spiders, fossils, early man, dinosaurs, rocks, and more.

The next day we invited students to pick a topic they found interesting. We wanted to know what they wanted to know about. We suggested that it could be from the list or from elsewhere and we all began to locate resources. Students found information at the school library, at the community library, and information at home. They began to bring in books, Egyptian games, art, fossils, tools and various other related items.

There were students who easily determined their questions this year, while others had difficulty putting their concerns into questions. It wasn’t that they did not know a lot about their topics, but rather that they did not know what they specifically wanted to know about their topics. Sally and I talked about this on several occasions and decided to give them much more time exploring, talking, and reading. We did a variation on the “in my own words” minilesson that we later came to call $1 + 2 + 3$ is the key. We told the students they had one minute to find something they wanted to read about. This meant finding a section in a book. We suggested they look for segments of text introduced by subtitles in bold lettering, thinking the subtitles might thrust out and put questions in minds. Students were then given two minutes to read their selections and three minutes to write what they read in their own words. The best questions came up as students interacted. Students Carla and Jen began wondering where dinosaurs were first found. As they read, they studied maps and their first question led to questions of how one dinosaur was discovered in one place rather than another. Like landmasses, their questions shifted and they started asking about continental drift.
More students than not chose to work with partners. There was lots of noise in the classroom as students researched and wrote notes. Learning within partnerships was noisy. Sally felt the need to leave the room on occasion and go into the hall in order to remain calm. The noise bothered her but she did not want to disturb the collaborative climate.

The reading, talking, and exploring went on for two weeks. At this point, Sally and I decided that we observed a great deal of learning taking place. We had overheard meaningful student conversations and found the majority of students engaged in their work throughout our workshop time. Sally and I wondered if a written product had to be the end result of a research unit. We invited students to choose how they would share what they had learned with us and their classmates. We talked about options, but let the possibilities abound.

The students put their heads together and created a framework that gave the information students shared a very creative sense of order. They pretended they were on a field trip. A make-believe school bus picked them up and took them to the natural history museum. One student assumed the role of curator and went from one display to another in the museum. At each stop, a student posing as a museum official gave a report. Most students gave oral reports. Some students used their note cards to help them as they reported while other students used prepared written reports to assist them as they spoke. One student created a poster of Egyptian hieroglyphic writing; another brought in props and did a demonstration of the mummification process.

In the moment, we were all participants in the evaluation of this research unit and were very satisfied with learning for learning’s sake. There were no grades. There was learning and knowledge that could not be measured. We all simply applauded and celebrated the experience.

Limitations of the Project

There are several limitations in this project. No formal evaluation instruments were used to assess student achievement. Rather, Sally and Jill collected a variety of informal assessment data including classroom observations, teacher notes, anecdotal records, and short vignettes based
on their informal observations of and interactions with students. Sally and Jill evaluated, discussed and reflected on these data in debriefing sessions to reevaluate past lessons and plan future ones. However, analysis of these data was informal with Sally and Jill focusing on changes in their thinking over time and the relationship of these changes to curriculum and curriculum development. They did not focus on documenting the relationship between changes in teacher thinking and impact on student achievement. Given this limitation, this project is best viewed as a starting point for conducting a line of research that investigates: 1) the relationship between teacher beliefs on curriculum and student achievement; 2) the effect of different models of curriculum on student achievement; and 3) the effect of different models of curriculum on reducing the student “achievement gap” (Singham, 2003).

Findings

In this section we discuss findings that describe how Sally and Jill changed their practices and beliefs about curriculum and curriculum development over time. Specifically, we discuss changes across five areas: curriculum control, curriculum source, curriculum choice, curriculum content, and curriculum evaluation. Figure 2 illustrates these changes.

Curriculum Control. This area is based on the question, Who decides the curriculum? In Year 1 Sally and Jill clearly decided the curriculum, and were heavily influenced by a new curriculum guide adopted the school district. In Year 2 they still controlled much of the curriculum, but used the guide less and less to make curricular decisions. Rather, they used their experiences and reflections from Year 1 to make more informed curricular changes and instructional decisions. Curriculum control was changing from the external to the internal. That is, Sally and Jill were starting to collaboratively create curriculum from the inside the classroom, rather than follow a curriculum guide prepared by “experts” and produced outside the classroom. Finally, in Year 3 they and the students collaboratively created the curriculum altogether. They read and discussed different reading materials and, afterwards, explored and recorded potential inquiry topics these materials offered. Then, students selected, some individually and others in pairs, an interesting
topic to research. In the end curriculum control had changed almost totally away from a curriculum guide and replaced by topics socially constructed by teachers and students.

**Figure 2. Teacher Stories and Curricular Change**

<table>
<thead>
<tr>
<th>Curricular Beliefs</th>
<th>Curricular Practices Year 1</th>
<th>Curricular Practices Year 2</th>
<th>Curricular Practices Year 3</th>
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</thead>
<tbody>
<tr>
<td>Curriculum Control</td>
<td>Teachers decided what would be researched</td>
<td>Teachers decided what would be researched, but reflected on Year 1 experiences to decide</td>
<td>Curriculum generated as teachers and students interacted</td>
</tr>
<tr>
<td>Curriculum Source</td>
<td>Teachers selected Ohio History</td>
<td>Teachers selected science-based area of study, but branch into societal values, concerns, and human interest</td>
<td>Student-selected topics and questions determined the discipline</td>
</tr>
<tr>
<td>Curriculum Choice</td>
<td>Teachers determined topics and methods of exploration</td>
<td>Teachers open to additions/substitutions to topics, and to collaboration and exploration of topics by means other than reading &amp; writing</td>
<td>The curricular invitation enabled choice of topics, disciplines, ways of exploring, questioning, and forms of sharing knowledge</td>
</tr>
<tr>
<td>Curriculum Evaluation</td>
<td>Teachers determined curricular objectives and assessment criteria</td>
<td>Students select the draft to be evaluated, and teachers evaluate</td>
<td>Sharing knowledge from multiple perspectives, through different sign systems, and celebrating learning</td>
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Curriculum Source. This area is based on the question, *Who selects what themes and topics to be studied?* In Year 1 Sally and Jill unilaterally decided the theme (Ohio History) and the topics within that theme. In Year 2 they still decided the theme (Endangered Animals), but this time based it more on student interest than district mandate. They hoped that offering more “exciting subject matter” would enable students to assume more ownership over the research process than they did in Year 1. Curriculum source was changing from themes that students were expected to know to topics that they were interested in knowing something about. Finally, in Year 3 students selected their own topics and generated their own inquiry questions which, in turn, determined the academic discipline they pursued, i.e. Egypt - social studies; spiders, fossils, early man - Science. In the end curriculum source, as in curriculum control, changed from a “one size fits all” theme (Ohio History) decided solely by teachers to inquiry topics socially constructed by teachers and students.

Curriculum Choice. This area is based on the question, *Who decides how learning is conducted?* In Year 1 Sally and Jill were also influenced by the district curriculum guide that indicated students “needed to experience the research process.” So, they taught formal aspects of the research process including finding resources, making note cards, paraphrasing information, creating bibliographies, writing rough drafts, and submitting final copies. In year 2, however, they opened up more possibilities. Specifically, they were more open to students making additions and changes to topics based on students ongoing readings about endangered animals. In addition, they were more amenable to students learning about their topics through means other than reading and writing. Curriculum choice was gradually changing from teachers to students; that is, from others to self-selection. Finally, in Year 3 they created a series of curricular invitations that enabled students to engage in different forms of question-asking, choose from a variety of potential topics, consider different ways of exploring topics, and participating in different ways of sharing their knowledge. In the end curriculum choice changed from teachers delivering curriculum mandates to offering curricular invitations.
Curriculum Content. This area is based on the question, *Who decides what questions get asked and answered?* In Year 1 Sally and Jill identified what topics within Ohio History would be addressed, and guided students in asking individual research questions after observing that they were having difficulty deciding what they wanted to know about the topic. In Year 2 they continued to help students generate and write research questions, but this time the process was much more social and collaborative. Instead of students asking individual research questions, they were invited to “double up with a partner” to explore interesting endangered animals and even “do the same animal as another.” Curriculum content was changing from individually produced products to socially constructed explorations. Finally, in Year 3 they adapted their instructional practices based on students’ evolving inquiry questions. For instance, with students who were having difficulty finding a topic, they helped them locate more resources. With other students who were having difficulty selecting from a growing list of topics, they helped them fine tune their questions. In the end curriculum content changed from teachers predetermining research questions to supporting students in question-asking and adjusting their instructional practices to enhance the process.

Curriculum Evaluation. This area is based on the question, *How is learning evaluated and assessed?* In Year 1 Sally and Jill once again used the district guide as a primary resource to predetermine curricular objectives and identify assessment criteria for this project. Students’ final drafts were the primary basis for evaluation. In Year 2 they still required some formal aspects of research papers (note cards) and deadlines for work, especially rough draft writing. But this time they allowed students to explore alternative ways to share their learning. These opportunities included participating in peer conferences and writing letters to friends in the room describing what they were learning about their selected animal. Curriculum evaluation was changing from a focus on an individual final product to a series of social experiences. Finally, in Year 3 they invited students to explore different ways that they can share their knowledge, engaging them in oral reports, decorative posters, and active demonstrations. In the end curriculum evaluation changing from grading a final written product to celebrating learning in many different ways and from many different perspectives.
Discussion

These teacher stories of curricular change have challenged us to think more broadly and more deeply about curriculum and curriculum development. They also have reminded us that creating challenging and meaningful curriculum is very thoughtful work. As Sally and Jill would claim, it is also very hard work.

At one level these stories illustrate that curricular change is a highly complex process that can take place when teachers are reflective practitioners. By reflective practitioners, we mean teachers who are continually observant, thoughtful, and reflective about the nature of learning and the art of teaching. Teachers as reflective practitioners continually try to understand what they currently believe about learning, articulate to themselves and others why they believe what they do, and use teaching as a powerful tool to enhance student learning and promote their own growth. We hypothesize that it is because the teachers involved in this project were reflective practitioners that meaningful curricular change took place over time.

These teacher stories have also taught us several important lessons about teacher thinking and its relationship to curriculum and curriculum development. We have a renewed appreciation of and respect for the difficulty and complexity involved when teachers create curricular change in the classroom. It is very demanding work. We have also learned that what teachers believe makes a difference. Specifically, what teachers assume about knowledge, learning, learners, curriculum, and themselves as teachers can really make a difference in the lives of students, as well as in their own lives as teachers. In the end, we have learned that if classrooms are to become a community of learners, then teachers must see themselves and their students as creators of curriculum, as reflective practitioners, and as collaborative inquirers. The teachers in this project and their stories of curricular change offer us a good starting point.
References


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