SCHOOL BY DESIGN: HOW MEMBERS OF ONE SCHOOL COMMUNITY
CREATE (AND RECREATE) STUDENT SUCCESS THROUGH INQUIRY

by

JENNIFER M. BRILL

(Under the direction of Thomas C. Reeves)

ABSTRACT

Research has documented well the failure of most educational change initiatives and instructional technology innovations as well as the inadequacy of teacher professional development practices and traditional school structures to improve teaching and learning in K-12 schools. This failure has fostered the growing disempowerment of teachers. Instructional technology innovation research and educational change theories have identified the teacher as the lynchpin to the successful integration of teaching and learning improvements into practice. Teachers must be central actors in educational innovation.

New educational change theories and school-based practices suggest that a school which focuses on improving teaching and learning through processes of shared leadership and critical study may build the capacity of the school community to innovate in ways that advance student learning. Further, new ideas regarding professional development and practice that position educators as collaborative and critical researcher-practitioners may foster the innovative capacity of teachers. A social theory of learning may provide an organizing theoretical framework. However, the research base is thin. Inquiry is required to establish a theoretical framework firmly rooted in research.

The purpose of this study was to explore the dimensions that foster and sustain teachers as innovators and schools as innovative places for improved teaching and learning by studying an exemplary elementary school known for its innovative practices in teaching and learning. The study used an ethnographic, single case design. Data collection methods included individual and focus group interviews, observation, document analysis, and researcher self-interviews.

Findings revealed the school to be a continuously self-renewing community that employs a covenant of teaching and learning, a shared decision-making model, and a critical study process to pursue its central enterprise, student success in learning. Further, findings revealed alignment, connectedness, and inquiry as the three key dimensions that enable the school to create and recreate the school community it set out to be. Alignment
means school community members are side by side in agreement in terms of the outcomes they are seeking. Inquiry provides the means for staff and students to enact new and imaginative approaches for teaching and learning. Connectedness ensures the pursuit of student success through inquiry together as a community through public discourse and practice.

INDEX WORDS: Educational innovation, Teacher professional development, Social learning theory, Instructional technology, Elementary education, K-12 school, Community of practice, Learning community
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Dedication

This dissertation is dedicated to my mother, Camille M. Brill, whose love and support have been constant and inspiring during this four-year adventure.

When I was in college and going through a particularly difficult time, my mother bought me a small, wooden plaque with a picture of a sunset. The plaque read: "Trust God, Believe in Yourself, Dare to Dream." This was in the 1980s when it was common for people to give plaques such as these. You could buy them in many places and certainly, the local Hallmark store would be one of them. That plaque that my mother gave me hung on my dorm room wall and later, a wall in my first home.

For many years now, the plaque has hung in my memory. And when I am feeling particularly challenged, I hear those words of comfort softly murmured in my head: "Trust God, Believe in Yourself, Dare to Dream."

I see how, to date, my life has been very much about learning what it is for me to trust God, believe in myself and dare to dream. And, I imagine that the rest of my life will very much be about the same. My promise is that when I come across an opportunity to pass on what my mother gave to me, in that small, wooden plaque, I will.

Thanks Mom. I love you.
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Lastly, I want to thank all of the members of the Brownlee school community. Every day that I had the privilege of being with Brownlee was a very good day. I thank you for saying "yes." I thank you for your time, honesty, patience, humor, and incredible expertise. I thank you for showing me that school can be very different - a place of success, learning, and esteem for every child and, what do you know, for every adult too!
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Chapter One

Introduction

We must also remember that our institutions are designs and that our designs are hostage to our understandings, perspectives, and theories (Wenger, 1998, p. 10).

Background

Educational experts have recognized that most attempts at educational innovation in the United States have failed to substantially improve teaching and learning in schools (Ravitch, 2000). More and more, educational professionals from a variety of disciplines are beginning to recognize the disenfranchisement of teachers from the innovation enterprise as a core reason for this failure. In this chapter, I provide a context for these statements from three perspectives: instructional technology innovation, educational change initiatives, and teacher professional development and practice. I also propose a research study to explore the dimensions which foster teachers as innovators and schools as innovative places for learning, including a rationale for the project.

Instructional Technology Innovation

The promise of instructional technology to improve teaching and learning has a longstanding yet troubled history. As Means (1994) points out:

Electronic technology has been hailed as a powerful agent for transforming schools at least since the heyday of radio. Television in the 1960s, computer-assisted instruction in the 1970s, and microcomputer, videodisc, and artificial
intelligence in the 1980s all were supposed to create a new kind of classroom – yet they did not (p. xi).

Progressing into the 1990s, hypermedia, “the chunking of information into nodes that can be selected dynamically” (Dillon & Gabbard, 1998, p. 322), became a new focal point for improving education. Yet, in reviewing the research on the use of hypermedia to support learning, Dillon and Gabbard (1998) resolve that “the benefits gained from the use of hypermedia technology in learning scenarios appear to be very limited and not in keeping with the generally euphoric reaction to this technology in the professional arena” (p. 345).

In the new century, distance learning technologies, especially web-based resources, are the latest technologies to move to the forefront as the innovations expected to dramatically change current approaches to teaching and learning (Bonk, Cummings, Hara, Fischler, & Lee, 2000; Owston, 1997; Wiens & Gunter, 1998; Zhao, 1998). Research and practice in this relatively new area continue to proliferate (Lewis, Alexander, & Farris, 1998) with the bulk of findings undoubtedly yet to come. However, in their substantial review of the literature on the use of telecommunications in the classroom, Fabos and Young (1999) conclude, “expected benefits are inconclusive, overly optimistic, and even contradictory” (p. 249). Further, the authors suggest, “While distance learning technologies may appear to be magical education experiences, all educators must first step back, critically evaluate the inevitably enthusiastic rhetoric, and attempt to understand the complex contextual framework behind the push for telecommunication exchange” (p. 250). Fabos and Young (1999), along with Apple (1991), urge teachers and administrators to make decisions regarding the use of
technologies that emphasize the best interests of students rather than those of industry, politicians, or other influential entities.

Thus, although most would agree that the last seventy years have been marked with extraordinary and life-enriching technological advances, the large-scale application of these innovations by schools in order to substantially improve teaching and learning is yet to be fully realized (Report to the president on the use of technology to strengthen k-12 education, 1997; Zhao, 1998). Why have instructional technologies had only a modicum of impact in improving learning in schools? What can be done differently in the future to ensure that teachers and learners take advantage of such technologies fully and appropriately?

Clearly, some ground has been made in introducing new technologies into the classroom and several noteworthy examples of teachers and students using technology to advance their teaching and learning goals can be identified. Major instructional technology initiatives such as the Apple Classrooms of Tomorrow project (What's ACOT?, n.d.), Schools for Thought (Schools for Thought, n.d.), Union City Online (Union City online, n.d.), and others have documented successes in integrating instructional technologies into school practices. However, these initiatives have also been met with challenges along the way that can now be characterized as “lessons learned” (Changing the conversation about teaching, learning and technology, 1995; Dwyer, Ringstaff, & Sandholtz, 1991; Schacter, 1999; Schools for Thought, n.d.; Union City online, n.d.; What's ACOT?, n.d.).

One apparent lesson learned among researchers is the discovery and recognition of teachers as central to the introduction and sustainment of instructional technology
innovations for improved teaching and learning. Teachers, it is found, are often marginalized from the design, development, implementation, and evaluation of instructional technology innovations. Research in this area, however, reveals repeatedly that a teacher’s knowledge, skills, beliefs, and role in the change process are of great consequence in the success or failure of such innovations (Barron et al., 1992; Dwyer et al., 1991; Fisher, Dwyer, & Yocam, 1996; Tiessen & Ward, 1997). The implication of these findings is that we must understand the circumstances by which teachers innovate successfully and advocate for these circumstances in their professional development, practice, and work environments.

Educational Change Initiatives

Similar to instructional technology innovation, broader educational change initiatives have a longstanding history, checkered with success and failure. As Jenlink (1995b) puts it:

An examination of the literary mindscape of educational change over the past three decades yields a picture of confusion and general state of fragmentation in efforts of change related to schools, schooling, and American education. A closer examination of the real-world landscape of change and reform efforts in schools over the past ten years indicates that approaches to change have focused on parts of the system, but seldom consider the context for change systemically. We work to effect change within the existing system in a piecemeal fashion, localizing efforts to a specific part of the system, failing to understand the interrelatedness of the system’s parts (p. 41).
Isolated, yet large-scale, past initiatives such as state-mandated curriculum and texts, standardized testing, site-based management, and whole-language learning have swept through schools as the answers to identified problems. Yet these initiatives, like instructional technology, have left little positive impact and, in some cases, created more problems (Fullan & Stiegelbauer, 1991; Glickman, 1993; Sarason, 1990). For example, high-stakes standardized testing research finds teachers narrowing curriculum goals and instructional strategies to cope with the pressure to attain satisfactory scores. At the same time, these teachers experience a decrease in motivation and professional interaction with other teachers (Corbett & Wilson, 1990). Studies on site-based management initiatives reveal a number of deleterious effects including the re-entrenchment of traditional top-down decision-making structures by reluctant administrators (Malen, 1994). In sum, after years of numerous and diverse educational change efforts in the United States, our society remains seemingly hamstrung in realizing significantly improved teaching and learning in its schools (Fullan, 1993a; Glickman, 1993; Jenlink, 1995a; Means & Olson, 1994).

Historically, educational change initiatives have largely come from outside schools, having been put upon teachers and local school administrators by federal, state, and even county agencies (Fullan & Stiegelbauer, 1991; Glickman, 1993). Such externally imposed innovation has often resulted in school-based professionals feeling frustrated and disenfranchised (Fullan & Stiegelbauer, 1991). This top-down approach bolsters the perception of teachers as mere pawns who must be directed by others regarding when and how to change (Carr & Kemmis, 1986; Fullan, 1993a). The disempowerment of teachers by external change agents has contributed to teachers
disengaging from their professional practice or even leaving the profession for higher-status careers (Fullan, 1993b; *Teaching as a profession*, 2001). At a time when teachers are being recognized by some educational change experts as *vital* to successful innovation (Fullan, 1993a; Glickman, 1993; Jenlink, 1995a), many educational change initiatives appear to "cut off the hand that feeds them" by disabling teachers as innovators.

More recent conceptions and implementations of school change may offer a way for teachers to assume more empowered positions. This *new* strategy for educational change strives for grassroots approaches, bringing together decisions about *what* educational innovations to pursue and *how* to implement them at the *school* level (Fullan & Stiegelbauer, 1991). With this new model for change, questions such as “Who will benefit from the proposed change?” and “How feasible is the idea and approach?” for a particular school move to the forefront. Further, teachers are pivotal in asking and seeking answers to such questions and leading school change (Apple, 1991; Fullan & Stiegelbauer, 1991).

As an example, schools belonging to the League of Professional Schools (LPS) in Georgia seek to enact continuous change toward improving teaching and learning for the benefit of students through daily attendance to processes of shared governance and critical study at the school level (Glickman, 1993). In the LPS model, the school community decides, with the counsel of current in-house data and selected external resources, *what* changes are most needed to improve learning and *how* and *when* these changes will be enacted. The school judges its own capacity for change at any given moment while, at the same time, continuously pursuing gains in its *capacity to change*
(Allen & Glickman, 1998; Fullan, 1992; Glickman, 1993). Further, the teachers at the school evaluate the progress toward learning goals and devise and implement innovation adjustments accordingly (Glickman, 1993).

Most importantly, with a grassroots model for innovation, the origination and continuation of educational change lies with individuals at the local school level, beginning with teachers and administrators and, with their professional leadership, extending to students, parents and the larger community (Fullan, 1992, 1993b; Glickman, 1993). The priority then is to establish and grow a learning community from the inside out. This shift by educational change leaders to locally-driven, community-led innovation is important because it may provide a means to foster teachers as innovators and schools as innovative places. In fact, very limited research and anecdotal evidence from League schools suggest this very thing (Allen & Glickman, 1998; Allen, Rogers, Hensley, Glanton, & Livingston, 1999). However, although these ideas have been developed and put into practice, the outcomes of such a model for teaching and learning innovation are largely undocumented and unresearched.

**Teacher Professional Development and Practice**

Conventional teacher professional development and school environments often reinforce teachers as a disenfranchised group. Technical models of teacher development approach teachers as technicians who merely put into practice the curriculum that is handed down to them from educational theorists, developers, and policy makers in highly structured and uniform environments. Hierarchical forms of governance in schools perpetuate teachers as recipients rather than initiators of educational change (Carr & Kemmis, 1986; Glickman, 1993).
Moreover, the conventional approach to teacher professional practice, by its highly dogmatic nature, excludes teachers from the ongoing investigation into and development of educational theory and practice (Carr & Kemmis, 1986). Such an autocratic system pushes teachers toward practicing their profession in a highly rigid and isolated manner (Apple, 1991; Carr & Kemmis, 1986; Fullan, 1993a; Nelson & Reigeluth, 1995), often shutting the door to opportunities for improved practice and heightened levels of professionalism, community, and empowerment. It is hard to imagine innovation of any kind thriving in such a confined system of professional development and practice.

Innovations in teaching and learning are, fundamentally, about change. Change theorists open our eyes to the complexity of innovation and the dynamic array of knowledge, skills, and environmental factors required to pursue it (Fullan, 1993a; Nelson & Reigeluth, 1995). Even beyond the most basic constraints of our current system, the reality is that, in conventional models of teacher professional development and practice, teachers have very little training in, experience with, and responsibility for changing teaching and learning practices in their schools (Bransford, Brown, & Cocking, 1999; Fullan, 1993a; Teaching as a profession, 2001). Yet, they are often the first to be blamed, and even held accountable, for educational inadequacies (Fullan & Stiegelbauer, 1991). Such a dynamic sets us all up for failure.

A more novel approach to teacher professional development and practice may value and foster in teachers the knowledge and skills to be effective innovators. The strategic approach to teacher preparation strives to develop teachers to be critical researcher-practitioners versed in the tools and processes for change, including the
collection and use of data to inform decisions, high levels of democratic discourse and collaboration, and a publicly reflective practice (Carr & Kemmis, 1986; *University of Missouri teacher education program*, n.d.). Newer models for a more democratic and collaborative school culture, including the League of Professional Schools' framework, provide supportive environments for teachers educated to think and act strategically (Allen & Glickman, 1998).

Pockets of schools enacting alternative models for teacher professional development and practice do exist but are still sparse. Strategic forms of teacher development and democratic models of school governance are, as yet, not widely understood or accepted (Allen & Glickman, 1998; *University of Missouri teacher education program*, n.d.; Valli, 1992; Zeichner, Melnick, & Gomez, 1996). It is vital that these alternative approaches and environments for teacher professional development and practice be researched for the promise they hold to advance teaching and learning innovation in schools.

A Need for Connectedness

Interestingly, although improvement in teaching and learning could easily be considered a shared focus, instructional technology innovation, educational change, and teacher professional development and practice largely operate in isolation of one another. As Means (1994) puts it, “Education reform and technology are two significant forces in our education system, but to date, quite unrelated” (p. 3). Further, as Fullan (1993a) makes the point repeatedly, initial teacher preparation and ongoing practice are replete with a consistent theme - isolation.
Speaking from the perspective of an instructional technologist, there are pockets of instructional technology professionals attending to broader issues of school change and teacher professionalism, as evidenced by the literature on systemic change (Jenlink, 1995b; Nelson & Reigeluth, 1995) and the activities of the Association for Educational Communications and Technology’s Change Council (Council on systemic change, n.d.) and Teacher Education division. However, this work remains very much on the fringe of the field, as substantiated, in part, by the dedication of a mere 60 pages out of over 1200 to these topics in one of the more recent and comprehensive literature collections, the Handbook of Research for Educational Communications and Technology (Jonassen, 1996).

More work must be done to bring the strands of instructional technology foundations and practices, educational change, and teacher professional development and practice into a cohesive whole. As an instructional technologist proposing to conduct research situated across these three domains, I am attempting to form some connections. What do these three areas have to offer each other and how can their strengths be leveraged? What can they tell us collectively about how teachers can be successful actors in teaching and learning innovation?

Statement of the Problem

Research has documented well the failure of most educational change initiatives and instructional technology innovations, the inadequacy of teacher professional development practices and traditional school structures, and the growing disempowerment and disillusionment of teachers in the process. Instructional technology innovation research and educational change theories have identified the teacher as the
 Lynchpin to the successful integration of teaching and learning improvements into practice. Since teachers are the ultimate agents for change at the school level, the disenfranchisement of teachers is a core problem that impedes progress toward substantial and sustainable innovation in teaching and learning practices. How can teachers be successful and empowered actors in educational innovation, including innovations that are derived from the field of instructional technology?

New educational change theories suggest that a school which focuses on improving teaching and learning through processes of shared leadership and critical study may build the capacity of the school community to innovate in ways that advance student learning. Further, new ideas regarding professional development and practice that position educators as collaborative and critical researcher-practitioners may foster the innovative capacity of teachers. The League of Professional Schools provides a model for such school communities and ongoing teacher professional development and practice. Anecdotal evidence reporting the success of certain member schools of the League of Professional Schools suggests the potential of these theories for practice. However, the research base is thin. Inquiry is required to establish a theoretical framework firmly rooted in research. The purpose of this study was to explore the dimensions that foster and sustain teachers as innovators and schools as innovative places for improved teaching and learning by studying an exemplary League school known for its innovative practices in teaching and learning.

Research Questions

The purpose of this study was pursued through one main research question and two sub-questions. The overarching research question was: How does one school known
for its innovative practices in teaching and learning foster and sustain community members as innovators for improved teaching and learning? This main question was mediated by two sub-questions: Who is this school community of innovators in teaching and learning practices and how do they "do school?" and What are the major dimensions that enable such a school community of innovators in teaching and learning practices to create and renew itself?

Significance of the Study

Perhaps you are familiar with the saying: “If you keep doing what you have done, you will keep getting what you have gotten.” Given the poor history of educational innovation in the United States, I do not think that we, as a country, want to keep “getting what we have gotten,” and we do not have to do so. We have new pieces to the puzzle. Instructional technology innovation research has demonstrated teachers as integral to teaching and learning improvements in schools. Yet, little research has been done to date, to truly understand teachers as innovators and schools as innovative places. The bottom line is that understanding teachers as innovators and schools as innovative places may reveal new leverage points for improving teaching and learning. New insights grounded in research may be used to advance teachers as successful innovators – innovators who are less the disenfranchised recipients of externally imposed change and more the proactive and engaged leaders of grassroots transformations in teaching and learning.

Even beyond the primary goal of improving teaching and learning practices, developing teachers as empowered and strategic innovators and schools as innovative places amplify as critical pursuits due precisely to the growing and often negative
influence of very powerful external influences on the life of schools. As Fullan (2000) puts it:

The external context of schools has changed dramatically over the past five years. The walls of the school have become more permeable and transparent. Teachers and principals now operate under a microscope in a way that they have never had to do before. This new environment is complex, turbulent, contradictory, relentless, uncertain, and unpredictable. At the same time, it has increased the demands for better performance and greater accountability. In light of this new reality, teachers and principals must reframe their roles and shift their orientations to the outside (p. 583).

Fullan (2000) names five external forces that schools must meet head-on and turn into alliances: “parents and community, technology, corporate connections, government policy, and the wider teaching profession” (p. 583). In order to work effectively with parents, the community, business, and government entities, teachers must have the skills and knowledge to collaborate and build innovative capacity both within the walls of the school and beyond. To leverage technological tools, teachers must become experts in teaching and learning design and be able to use the power of technology with students, colleagues, clients, vendors, and other potential partners. To deal with ever-changing and, at times, conflicting governmental policy, teachers must be well-informed in such initiatives as accountability and assessment and take an active professional role in shaping policy (Fullan, 2000).

Thus, the question of how teachers can be successful and empowered innovators and schools successful and empowered innovative places takes on even greater
significance. Fundamentally, it seeks to identify individual and environmental factors that will enable teachers to introduce innovation that, in their professional judgment, meets the learning needs of their students. However, it also seeks to better position teachers to answer the growing criticisms and demands of external forces in our culture.

Finally, instructional technologists are also, through their work, agents for positive change in a variety of environments, including schools. However, they are typically secondary to the day-to-day business of teachers in schools. In essence, we serve as external consultants to our K-12 clients, students and teachers. In our work, we focus largely on the capacities, needs, and circumstances of learners, a strength of our field. Additionally, we need to take into account the capacities, needs, and circumstances of teachers. This study is significant to the instructional technologist in particular by bringing to light dimensions that enfranchise teacher-led innovation. By understanding and supporting these dimensions, we strengthen the work of our clients and our own work in the process. Perhaps most importantly, by understanding and supporting teachers, we only advance a shared goal, improved teaching and learning.

A Note of Personal Significance

Speaking to researchers, Maxwell (1996) states:

It is important that you recognize and take account of the personal purposes that drive and inform your research. Attempting to purge yourself of personal goals and concerns is neither possible nor necessary. What is necessary is to be aware of these concerns and how they may be shaping your research, and to think about how best to deal with their consequences. In addition, recognizing your personal
ties to the study you want to conduct can provide you with a valuable source of insight, theory, and data about the phenomena you are studying (p. 16).

Like Maxwell, St. Pierre (1997) implicates the subjectivity of the researcher as a useful source of data in qualitative research. Further, denoting writing as inquiry, Richardson (2000) advocates for the insertion of these and other forms of transgressive data into research texts as a way to "deconstruct the myth of an emotion-free social science" (p. 695) and, in the process, pursue yet another kind of research validity.

Peshkin (1988) also addresses the issue of researcher subjectivity, not just in terms of exposing it but also managing it. Working from the premise that subjectivity is inevitable in research, Peshkin (1988) argues that:

Researchers should systematically seek out their subjectivity, not retrospectively when the data have been collected and the analysis is complete, but while their research is actively in progress. The purpose of doing so is to enable researchers to be aware of how their subjectivity may be shaping their inquiry and its outcomes (p. 25).

Peshkin (1988) dismisses as absurd the notion that a researcher who addresses his/her subjectivity as part of the research endeavor is somehow absolved of responsibility for it. Rather, he contends that owning up to one's subjectivity enables a researcher "to manage it…through collecting, analyzing, and writing up [the] data" (p. 28).

Throughout this study, I attempted to address my subjectivity through periodic journal entries regarding my personal thoughts and experiences as I moved through the research process. Further, I purposefully worked to manage my subjectivity through the
strategies afforded to me by the qualitative research tradition including detailed researcher logs, peer reviews, and participant member checks. These strategies, along with other methodological issues, will be discussed in detail in Chapter 3. Just now, I believe it important to share a bit about my personal purposes for pursuing this study.

Prior to returning to school for my doctoral degree, I worked as trainer, instructional designer, and learning consultant, primarily in industry, for thirteen years. In essence, I was a teacher. Employers, coworkers, and clients regarded me (and my colleagues) as an expert in teaching and learning design and application. I was treated with a great deal of professional respect for what I knew and what I did to help others learn and grow and advance in a very significant part of their lives, their work. I was looked to for "answers" when it came to problems of learning and performance. I was trusted with the decisions and resources necessary to execute my job according to my professional judgment. I was also expected to stay abreast of the field, continue to develop myself professionally, and bring new expertise to bear in my work. I believe firmly that being treated as a professional was not merely gratifying but, more vitally, empowered me to be more effective in my job and my career.

I have always regarded school-based teachers as associates engaged in professional pursuits similar to my own. Certainly, teachers in the schools were working with a different group of learners and under different circumstances. Nonetheless, we were both committed to helping others learn. For a long time, I have been deeply troubled by the lack of professional respect received by school-based teachers. (In fact, it is a main reason why, upon entering college, I did not pursue teaching as a career path.)
Without doubt, I would like to see my brother-in-law, sister-in-law, assorted family and friends, and my students treated more professionally in their work as teachers in the schools. (Of course I would; I care about them.) However, this is not the whole of it. Fundamentally, I believe that the disregard with which we hold school-based teachers impedes their ability to meet and exceed their professional capacities. I find this detrimental not just to school-based teachers but to students and, ultimately, all in our society.

What would happen if school-based teachers were treated with the same regard as their counterparts in industry? What might change if school-based teachers commanded the decision-making power, resources, and professional networks and development opportunities that learning and performance consultants enjoy? How might it change their and our experiences of learning and teaching in schools? Fundamentally, I suspect.

Clearly, I have concerns and perspectives about teaching, teachers, schools, and learning that orient me toward my research in professional and personal ways, my sense of teacher advocacy being one position. By continuing to insert my subjectivity periodically throughout this text, my purpose is to gain clarity as to my relationship to and impact on the study. Further, my goal is to provide opportunities for a reader to gain insight into who is behind this work. Moreover, in consciously exposing and managing my subjectivity, my hope is to increase the validity of the research.

Definitions

In this section, I provide definitions of those terms that are integral to this study and, therefore, arise repeatedly throughout this document. In the interest of clarity, the
definitions will be revisited, as needed, in subsequent chapters in order to provide sufficient context.

*Educational Change*

Fullan (1998) outlines the history of educational change by delineating the field chronologically into overlapping categories that reveal four major themes of influence and contribution. Briefly, the pre-1972 era was influenced heavily by the works of Dewey, Durkheim, Parsons, and Weber and later, Goodlad, Havelock, Miles, Rogers, and Sarason. By the 1960s, this period was dominated by the United States' push to stay abreast with the scientific accomplishments of the Soviet Union. A national strategy and federal funding fueled large-scale curriculum reforms such as New Math, technological innovations such as educational television, and organizational innovations such as the open school. Fullan (1998) characterized this time period as the adoption era in that it flooded schools with innovations focused in the content rather than the process of change.

The decade from 1972-1982 is described as the implementation decade. During this time period, numerous critiques by Goodlad, Sarason, and others pointing to the failure of most educational innovation attempts broadened the focus of the field to include not just the content of innovation but also its implementation. The literature introduced models for addressing when and how to implement innovations and the capacities required by users in order to implement successfully. Although the innovator established a minor presence in the innovation process, typically as a passive recipient of externally driven innovations, the overriding focus was to get educational innovations implemented by users (Fullan, 1998).
From 1982-92, Michael Fullan established a significant presence in the field, primarily through his book with Suzanne Stiegelbauer, *The New Meaning of Educational Change* (Fullan & Stiegelbauer, 1991). The word *meaning* was used with intent in that the authors were attempting to shift the focus of the field to understanding that innovation must have meaning for individuals and groups in order to be successful. Here, scholars such as Fullan, Sarason, Hall, Lortie, and Sirotnik discussed innovation from the perspective of teachers, students, and administrators as well as schools, districts, and governments. Implementation was still a focus. However, work in the area of developing the capacities of individuals to change (through professional development) and groups to change (through systems analysis and redesign) introduced a bigger picture to educational change (Hargreaves, Lieberman, Fullan, & Hopkins, 1998).

Fullan (1998) asserts that, beginning in 1992, we have fully entered into an era in educational change centered on change capacity. Further, given the influence of chaos theory, practitioners and scholars are moving away from understanding capacity-building as linear, prescriptive, and discrete toward viewing it as ongoing, multi-layered, complex, and generative. Additionally, moral purpose, change with the goal of making a difference or making progress, is coming to the fore through the growth of such initiatives as service learning (Fullan, 1993a; Glickman, 1998; Sergiovanni, 1992).

Importantly, this study is situated within the history of educational change in that it reflects on a generally unsuccessful past distinguished by an emphasis on innovation products and later, externally driven change. The work finds its focus in straddling Fullan's eras of meaning and capacity-building by exploring how individuals and groups, namely teachers and a school, facilitate progress in student learning through innovation in
teaching and learning. For manageability, the study merely glances toward the future, only hinting at the complexity of change through the lens of systems theory.

**Innovator and Innovation**

From a study conducted by Hannan, Silver, and English on innovations in teaching and learning, Hannan (2000) reports how the researchers defined the terms innovator and innovation. Innovators were:

- those who had introduced methods of teaching and learning new to their own situation, their own course, department or institution. These were planned rather than accidental changes, designed, but not guaranteed, to improve teaching and learning. We were interested here in the small as well as the large scale, in one-module innovations as well as those introduced across an institution or even on a national level, in the unfunded individual initiative as well as nationally funded projects. We were particularly interested in the learning/teaching interface, in the *methods* of teaching and learning,…the mode of delivery used by tutors and the methods of discovery used by students, the ways of teaching and of learning. Our primary focus [was] on attempts to introduce new methods of teaching and learning (p. 1).

In this study, I subscribe to these same definitions of innovator and innovation, broadly drawn in terms of innovation characteristics but clearly focused in terms of innovation purpose - to improve teaching and learning.

**Instructional Technology**

Instructional technology is defined as “the theory and practice of design, development, utilization, management and evaluation of processes and resources for
learning” (Seels & Richey, 1994, p. 9). For the purposes of this study, this definition is useful, particularly as it includes not just the resources for learning but the processes as well. I explore processes and resources for learning throughout this research including in relation to such concepts as a community of practice and a learning community. Further, with a degree in instructional technology and over 15 years of experience working in the field, core disciplinary concepts such as systems theory, instructional systems design (ISD), and needs assessment influence my analytical frame; that is, how I "see the world" and therefore, approach this study. I introduce relevant instructional technology concepts as needed throughout the text.

Community of Practice

In this study, I subscribe to Wenger's definition of a community of practice. Wenger (1998) delineates a community of practice as comprising three dimensions: a joint enterprise, mutual engagement, and a shared repertoire. A joint enterprise is a dynamic response by members of a community to its situation. It is dynamic in that it is negotiated continuously by its members as it is pursued. Further it requires the mutual accountability of members regarding such things as:

what matters and what does not, what is important and why it is important, what to do and not to do, what to pay attention to and what to ignore, what to talk about and what to leave unsaid,…[and] when actions and artifacts are good enough and when they need improvement or refinement" (Wenger, 1998, p. 81).

The second dimension of a community of practice, mutual engagement, means that people in the community are "engaged in actions whose meanings they negotiate with each other. Further, in order to have engagement, people must be included in what is
important to the community and must regularly influence each other's understanding by talking and working together closely.

The development of a shared repertoire is the third dimension of a community of practice. The repertoire is produced or adopted by community members as an integral part of its practice and includes such things as "routines, words, tools, ways of doing things, stories, gestures, symbols, genres, actions, or concepts" (Wenger, 1998, p. 83).

Learning Community

Sergiovanni (2000) states, "a learning community involves the cultivation of certain building blocks that provide a different framework for what we do, why we do it, and how we do it" (p. 66). Further, he clarifies his description of a learning community by contrasting it with the ordinary school:

In ordinary schools, teachers are involved in their own private practices. A school of thirty teachers is defined as a collection of thirty individual practices. In the learning community, individual practices are not abandoned but are connected to shared practices. At the school level, a single practice of teaching exists that is shared by everyone (p. 68).

Senge (1990) speaks in terms of a learning organization, defining it as an organization “where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together” (p. 3). Drawing on the work of Senge, Fullan (1993a) characterizes the learning organization as "expert at dealing with change as a normal part of its work, not just in relation to the latest policy, but as a way of life” (p. 4).
Wenger (1998) differentiates a community of practice from a learning community in that the latter adds the element of learning. For Wenger, learning manifests itself as a tension between experience and competence and is vital to keeping the practice of a community fresh. In effect, a learning community "offers an ideal context for developing new understandings because the community sustains change as part of an identity of participation” (Wenger, 1998, p. 215). In other words, change is what the community is about, learning is at the very center of its endeavor.

For the purposes of this study, I am in accord with all of the definitions in that they are not contradictory and certainly share a number of elements in common. However, I align most closely with Wenger's definitions of a community of practice and a learning community as his separation affords a precision that the other definitions do not. Therefore, when I use the term learning community, my assumption is that the community includes the three components of a community of practice and extends itself by incorporating learning and change as central to its practice.

Shared Governance

In this study, I look to the League of Professional Schools for a definition of shared governance. The League describes shared governance as "a collaborative process that ensures all persons democratic involvement in decisions about teaching and learning (Allen et al., 1999, p. 37). As a leadership method, the goal of shared governance is to involve all stakeholders (teachers, administration, students, parents, other community members) in the decision-making process and, in effect, yield better decisions about teaching and learning. Importantly, shared governance invites everyone to participate in decision-making; however, no one is required to participate. Regardless of participation
level, shared governance stipulates that everyone will support decisions once they are made.

A focus of shared governance is to distinguish between decisions based on their perceived impact on student learning and use these distinctions to develop strategic guidelines for who makes what decisions. For example, curriculum decisions have a high impact on student learning and therefore, necessitate the involvement of teachers (Allen et al., 1999; Glickman, 1993).

Blase and Blase (1994) found that shared governance principles such as building trust, developing democratic decision-making structures, encouraging autonomy, and encouraging innovation/risk-taking contribute to a teacher's sense of efficacy and commitment to decisions arrived at democratically.

**Teacher Professional Development**

Conventionally, teacher professional development is defined as providing learning opportunities for practicing teachers whereas teacher education is defined as providing initial, foundational preparation for preservice teachers. The customary model of teacher professional development "consists of short-term workshops and training sessions, usually sponsored by the school district and scattered throughout the year" (Moon, Ben-Peretz, & Brown, 2000, p. 747). Generally, universities also participate in inservice teacher professional development through evening and summer courses. Carr and Kemmis (1986) characterize this form of professional development as a technical approach. Such traditional forms of professional development have been found to be inadequate in significantly impacting teacher knowledge or practice (Moon et al., 2000).
Newer forms of teacher professional development that support more contemporary notions of learning as social, engaging, and generative and educational change as ongoing and emergent, are evolving. Newer models embrace principles such as: active participation, sustained engagement with knowledge and colleagues, inquiry into student work, new knowledge situated in current practice, critical discourse, and leadership beyond the classroom (Moon et al., 2000). Carr and Kemmis (1986) characterize this form of teacher professional development as a strategic approach. Research is still needed to determine the efficacy of such contemporary forms of teacher professional development (Moon et al., 2000).

In this study, I do not delineate between preservice education and inservice professional development. Rather, I approach the professional development of teachers as a continuum that includes the preservice educational experience and extends throughout the life of professional practice.
Chapter Two

Review of Literature

Introduction

The purpose of this study was to explore the dimensions that foster and sustain teachers as innovators and schools as innovative places for improved teaching and learning by studying an exemplary League school known for its innovative practices in teaching and learning. The review of the literature related to this study includes four general areas: instructional technology - its innovation initiatives and lessons learned; school change theory, research, and practice; teacher professional development and practice; and social learning theory. Specifically, my goal for this review was to seek answers to the following questions:

- What insights does recent research (since the mid-1980s) on school-based instructional technology (IT) initiatives have to offer regarding the role of the teacher in successful innovation?
- What does the recent literature (from the 1980s to the present) on school change theory, research, and practice contribute to our understanding of teachers as successful innovators and schools as innovative places?
- How do traditional and contemporary notions of teacher professional development and practice impact the role of teachers as innovators and schools as innovative?
• What do more recent ideas about learning as a social enterprise have to contribute to the realization of teachers as innovators and schools as innovative environments?

By investigating these questions, I arrived at conclusions that facilitated my understanding of certain aspects of this research. Such mid-level theory serves to illuminate certain areas of interest while leaving others in the dark; what Maxwell (1996) refers to as using "theory as spotlight" (p. 33). Moreover, I arrived at a generalized theoretical framework for making sense of the research, for organizing and relating seemingly unconnected data elements. The use of "theory as coat closet" (Maxwell, 1996, p. 33) is useful for housing macro-level theory components that connect the data into something larger and more unified. I present specific insights that then evolve into an organizing framework as the chapter progresses.

Sources for Theoretical Work

My literature review began in a formal sense with my comprehensive exams during the Winter of 2000 and it continues today. The main resource that I used to conduct my search for relevant literature was the University of Georgia Libraries System, including the Galileo databases and the GIL catalog. I looked to the World Wide Web as a secondary resource, using search engines such as Yahoo and Google. I also conferred with professional colleagues both here and afar as a third source of knowledge. To a lesser degree, I drew on exploratory research and experiential knowledge (Maxwell, 1996), particularly in my work as a graduate assistant with the League of Professional Schools. In consulting these resources, I covered quite a bit of subject territory including: instructional technology foundations, initiatives, research, and practice, change theory
and practice (especially school change theory and practice), teacher professional
development and practice (both preservice and inservice), and social theories of learning
and innovation.

**Instructional Technology: Innovation Initiatives and Lessons Learned**

Seels and Richey (1994) define instructional technology as “the theory and
practice of design, development, utilization, management and evaluation of processes and
resources for learning” (p. 9). Instructional technology initiatives vary greatly in terms of
environment, duration, focus, and scale. Many initiatives take place in industry and
government settings with fewer situated in schools (*Penn state instructional systems*,
n.d.). Some initiatives span several months and are fairly discrete while others span years
and are part of large-scale, multi-layered programs. The instructional technologist
interprets the word “technology” broadly to include both tools and processes. Thus, the
focus of instructional technology projects often includes some combination of “hard”
technologies (e.g. computers, telecommunications, video, etc.) and “soft” technologies
(e.g. strategies for practice and feedback, learning needs assessment, knowledge
construction and representation, etc.) (*Anglin, 1995*; *Educational technology at San
Diego State University*, 1999; *Penn state instructional systems*, n.d.).

Small-scale instructional technology projects in schools abound. A sampling hints
at the diversity of such activities. At Taylorsville Elementary in Indiana, students utilize
the Internet and information retrieval tools to support self-directed learning. In Texas,
Northbrook Middle School students form interdisciplinary teams to develop critical
thinking skills using computing and networking technologies. In California’s Blackstock
Junior High, students use computer-aided design (CAD) software to describe objects
before developing them (*Report to the president on the use of technology to strengthen k-12 education*, 1997).

Large-scale instructional technology initiatives are less commonplace but include the Apple Classrooms of Tomorrow (ACOT) program (Dwyer et al., 1991), the Adventures of Jasper Woodbury and Computer Supported Intentional Learning Environments (CSILE) which are components of the Schools for Thought project (*Schools for Thought*, n.d.), the Union City Online initiative (*Union City online*, n.d.), the West Virginia Basic Skills/Computer Education program (Schacter, 1999), and the New Educational Technologies (NET) in Ontario initiative (Fullan, 1992). These projects share a goal of incorporating instructional technologies into schools to improve learning, span a number of years, include multiple classrooms, and enlist significant financial and other forms of support from a variety of resources. Due to the limited scope of this review, I offer a sense of the large-scale instructional technology initiative by providing an overview of two, ACOT and Schools for Thought. Further, I identify what the research on these two initiatives has to offer regarding the role of the teacher and schools in successful innovation.

*Apple Classrooms of Tomorrow*

Spanning over a decade, the Apple Classrooms of Tomorrow project is described succinctly by its primary partner, Apple Computer, Inc.:

Apple Classrooms of Tomorrow (ACOT) was a research and development collaboration among public schools, universities, research agencies, and Apple Computer, Inc. Initiated in 1985, ACOT began its work in seven classrooms that represented a cross-section of America’s elementary and secondary schools. Its
goal was to study how the routine use of technology by teachers and students might change teaching and learning. During the thirteen years of research, ACOT studied learning, assessment, teaching, teacher development, school design, the social aspects of education, and the use of new technologies in more than 100 elementary and secondary classrooms throughout the country (What’s ACOT?, n.d., p. 1).

ACOT classrooms provided teachers and students with immediate access to a diverse array of hardware including computers, videodisc players, video cameras, scanners, CD-ROM drives, printers, laser disks, and modems as well as a variety of software tools such as word processors, databases, spreadsheets, graphics packages, online communication services, and hundreds of instructional software titles (Dwyer et al., 1991; What’s ACOT?, n.d.). Thus, the physical environment of classrooms participating in the ACOT project was dramatically altered from the start of the initiative.

A focus of the ACOT initiative was on conducting research that could be used to inform future practices. Overall, ACOT research concludes that “the introduction of technology into classrooms can significantly increase the potential for learning, especially when it is used to support collaboration, information access, and the expression and representation of students’ thoughts and ideas” (What’s ACOT?, n.d., p. 1). Further, summarizing the first ten years of the ACOT project, Coley, Cradler, & Engel (1997) found that ACOT students:

- Explored and represented information dynamically and in many forms.
- Became socially aware and more confident.
• Communicated effectively about complex processes.

• Used technology routinely and appropriately.

• Became independent learners and self-starters.

• Knew their areas of expertise and shared that expertise spontaneously.

• Worked well collaboratively.

• Developed a positive orientation to the future (p. 39).

A closer look at specific, individual studies yields a mix of findings. In evaluating five ACOT classrooms across the country, Baker, Gearhart, and Herman (1994) found that ACOT students demonstrated positive attitudes and, although inconclusive, appeared to engage in higher order reasoning and problem solving. ACOT teachers in these classrooms were found to lecture less and facilitate cooperative group work more. However, ACOT students performed no better on standardized tests than comparison groups who did not have access to ACOT-supplied technologies.

In other assorted studies of ACOT classrooms, researchers noted that ACOT teachers, despite being surrounded by and trained on new technologies, showed little change in their practices in the classroom. If fact, many teachers adapted the new technological resources to traditional instructional activities. As Dwyer, Ringstaff, and Sandholtz (1991) articulate:

Although the project’s classrooms are radically altered by the physical presence of technology, each member of ACOT’s teaching staff brings to those classrooms deeply held beliefs about schooling. These beliefs were ingrained in the
traditional classrooms where they spent years, first as students and later as teachers (p. 46).

Contrary expectations from district and state governing bodies served as an additional hindrance, actually discouraging many teachers’ attempts at innovation (Dwyer et al., 1991). Thus, both teacher beliefs and situational constraints were found to impede progress toward technology integration in ACOT settings, findings supported by other studies as well (Zhao, 1998).

Although the ACOT project did indeed demonstrate that teaching and learning practices can be positively impacted by instructional technologies, it also resulted in some significant lessons learned. In fact, Dwyer, Ringstaff, and Sandholtz (1991) identify two priorities for educational reform given ACOT experiences:

- Teachers must be given an opportunity to reflect on their own beliefs about learning and instruction and to develop a sense of the consequences of alternative belief systems.
- Administrators must be willing to implement structural and programmatic shifts in the environment, for teachers who are instructionally evolving (p. 51).

Interestingly, by the end of its first decade, ACOT collaborators began to broaden their goals to take into the account the larger landscape of educational change, including such issues as teacher professional development. As a result of lessons learned, they adopted the view that “the major challenge to supporting school learning with technology lay not with the technology but in the professional development of educators” (Fisher et
al., 1996, p. 7). In effect, Apple has redirected its efforts toward designing and offering a diverse array of teacher education resources, including face-to-face and online learning opportunities, (Apple learning professional development, n.d.) as ACOT researchers share “hard-won lessons about the importance of teachers in the school change process” (Fisher et al., 1996, p. 236).

ACOT findings debunk a common belief that a summer workshop or handful of after-school seminars will enable teachers to implement new instructional practices regardless of the presence or absence of technology. An investment in teachers appears especially critical if the adoption of innovative pedagogies is to accompany the infusion of media and technology in schools. Similarly, efforts to introduce technology as a catalyst for pedagogical change are unlikely to succeed without a reframing of teacher work and teacher work environments that are more supportive of innovation in teaching and learning.

Schools for Thought

Originating in 1993, Schools for Thought (SFT) has grown into a project of international scope with 22 classrooms in the United States and Canada as of early 1997 (Secules & et al., 1997). The program combines three educational innovations, the Jasper Woodbury series, Computer-Supported Intentional Learning Environments (CSILE), and Fostering Communities of Learners (FCL), with the goal of restructuring classrooms into collaborative, knowledge-building communities that emphasize in-depth problem formation and problem-solving across content areas (Schools for Thought, n.d.). The Jasper Woodbury series engages students in mathematical problem-finding and problem-solving through a series of richly contextualized adventures presented on videodisc (The
adventures of Jasper Woodbury, n.d.; Barron et al., 1992). CSILE is a networked database environment that enables information-sharing and knowledge-building among students (Secules & et al., 1997; Tiessen & Ward, 1997). The Fostering Communities of Learners (FCL) project invites collaboration through practices such as reciprocal teaching (Tiessen & Ward, 1997).

Together and alone, these innovations have demonstrated successes in a number of areas. For example, a 1994-95 study of Schools for Thought classrooms resulted in SFT students performing better than comparison classrooms in four areas on standardized tests and equal to comparison students in the remaining six test sections. On complex writing and reading assessments, SFT students performed higher, and in some cases, statistically significantly higher, than non-SFT students. Further, SFT students demonstrated lower absence and withdrawal rates (Schools for Thought, n.d.).

Studies have also revealed certain challenges. For example, collaborators on the Jasper Woodbury series note that even though the program affords opportunities for collaborative and generative learning, there is no assurance that these opportunities will be realized. In fact, the teacher’s chosen model for teaching is a pivotal force. If a highly instructive model is chosen, teachers “tend to structure the solution for students and ‘walk them through it,’ occasionally asking them to supply the ‘facts’ needed to solve the problem” (Barron et al., 1992, p. 73). Such an approach defeats, or at least dilutes, the goal of Jasper to create a problem-posing/problem-solving, cooperative environment for learning. Further, although the combination of three collaborative innovations in the Schools for Thought program is thought to encourage the teacher to remain in a facilitative role, it is acknowledged that the manner in which these instructional
technologies are used in the classroom will ultimately determine their effectiveness
(Tiessen & Ward, 1997).

Thus, research on the SFT group of innovations, similar to ACOT studies, points
toward the critical role of the teacher in influencing their effectiveness. An implication of
this outcome is that instructional technologists must attend to teacher development and
practice and the work (school) environment in order achieve greater success in improving
teaching and learning with its innovation initiatives. Further, it is reasonable to conjecture
that instructional technologists would need to collaborate with colleagues who are
beyond the boundaries of their domain of expertise, for example, educational change
theorists and teacher education professionals.

Multiple Perspectives on School Change: Theory, Research, and Practice

The experiences documented by such instructional technology initiatives as
ACOT and Schools for Thought provide evidence for how challenging it is to
significantly and enduringly transform the learning culture in a school simply by
introducing one or more innovations that embody the newly desired culture. These and
other initiatives (Barron et al., 1992; Dwyer et al., 1991; Healy, 1999; Zhao, 1998) have
documented that many teachers tend to adapt a new instructional technology, or other
innovation, to how they learned and were taught to teach, typically in very structured and
instructivist ways. Or, if they cannot adapt it, they ignore it.

School change literature from the last several decades has commented on this
challenge to innovation in schools. Leading educational change theorist, Michael Fullan
(1993a) expresses the phenomenon this way:
The hardest core to crack is the learning core – changes in instructional practices and in the culture of teaching toward greater collaborative relationships among students, teachers, and other potential partners. Stated differently, to *restructure is not to reculture* – a lesson increasingly echoed in attempts at reform. Changing formal structures is not the same as changing norms, habits, skills, and beliefs (p. 49).

This struggle to help teachers embrace new instructional practices is exacerbated by a system that is fundamentally not structured for change, especially at the policy and governance levels. Superficial yet largely publicized governmental mandates often complicate any attempts at innovations that are truly in support of improved learning. While often exerting tremendous pressure on teachers and administrators to embrace complex reforms, or at least “act as if,” such decrees offer little or no guidance (Fullan, 1993a; Means, 1994). Georgia is an example of a state that has, in recent years, legislated extensive educational reforms which, to many educators, simply do not take into account the reality of schools in the state and overwhelm an already overtaxed system with an onslaught of piecemeal initiatives (Parsons, 1959; Puckett, 2000). Moreover, legislative policies may actually contradict the underlying goals of some truly valuable learner-centered innovations. Government-mandated standardized tests are one case-in-point of policy that actually causes us to overlook many of the benefits of innovations such as *Schools for Thought* by simply not measuring them in meaningful and appropriate ways (*Report to the president on the use of technology to strengthen k-12 education*, 1997).

Fullan (1993a) sums up this dilemma of school change:
On the one hand, we have the constant and ever expanding presence of educational innovation and reform. On the other hand, however, we have an educational system which is fundamentally conservative. The way that teachers are trained, the way that schools are organized, the way that the educational hierarchy operates, and the way that education is treated by political decision-makers results in a system that is more likely to retain the status quo than to change. When change is attempted under such circumstances it results in defensiveness, superficiality or at best short-lived pockets of success (p. 3).

Fullan (1993) argues that the answer for those engaged in educational change is not to infuse the system with more innovations and reforms but to collaborate at developing a new mindset and system for education beginning at the teacher and school level. Work in the areas of change and systems theory clearly reveal change, including educational change, as complex, nonlinear, and systemic (Fullan, 1993a; Hansen, 1995; Jenlink, 1995b). In response to the nature of change, Fullan (1993a) asserts that each school must reculture itself into a continuous learning organization, one that is “expert at dealing with change as a normal part of its work, not just in relation to the latest policy, but as a way of life” (p. 4). Banathy (1995) concurs, explaining, “When learning comes to focus, the learner becomes the key entity of the system, and the primary task is to provide resources, arrangements, and opportunities for learning. A learning focus requires the design of a new system” (p. 15).

Change experts identify the teacher as the lynchpin to creating the continuously learning school for two reasons. First, above all else, most teachers share in a fundamental purpose, the desire to help children learn and grow into productive citizens
in a complex and ever-changing world (Fullan, 1993a). Second, realizing this purpose places teachers “precisely in the business of continuous innovation and change” (Fullan, 1993a, p. 4). Thus, in order to do their jobs competently, teachers must develop and be seen as experts in the dynamics of continuous improvement and change. To do so means developing knowledge and skill as lifelong learners and agents for change (Fullan, 1993a; Fullan & Stiegelbauer, 1991; Jenlink, 1995a; Nelson & Reigeluth, 1995), a goal that clearly has implications for teacher professional development.

Not surprisingly, Jenlink (1995a) extends the need for change agency knowledge and skill to all stakeholders involved in the educational change process – teachers, administrators, external consultants such as instructional technologists, and the like - so that there is a common language for change. Thus, if instructional technologists are to be facilitative partners in school change, they too must acquire the knowledge and skill base for lifelong learning and change. An implication here is that instructional technology professionals must fortify their ties to one of the field's foundations by engaging rigorously in the study and development of learning theory that informs an innovative educational practice.

In the book *Technology and Education Reform*, Means (1994) links these conceptions of school change back to the field of instructional technology when she asserts that teacher knowledge and skill must come before technological innovation if we are to make advances in skillful teaching and learning. When it comes to school change, Means (1994) makes the argument that we must first address process (how we learn and change) before tools (what we use to learn and change). To support these claims, Means and Olson (1994) point to the research on three schools engaged in large-scale
technology integration initiatives, two of which proved much more successful than the third.

Two California elementary schools, the Frank Paul Elementary school and the Open School, initiated and pursued long-term change efforts focused on teaching and learning practices that emphasized authentic and challenging tasks over extended blocks of time, heterogeneous and collaborative work groups, multidisciplinary curricula, students as explorers, and teachers as facilitators and coaches (Means & Olson, 1994). In both schools, technological innovations were integrated selectively and secondarily to support the newly established learning culture. Having extensive control over decisions impacting their school, it was the teachers and administrators who determined what instructional technologies would be integrated along with when and how they would be implemented (Means & Olson, 1994).

Already having an innovative and empowered learning culture in place locally, each school adopted a strategy toward technology integration that advanced existing teaching and learning goals. Teachers came to view instructional technologies as tools with the potential of advancing pre-determined priorities and thus sought to integrate them where appropriate. A variety of technologies were adopted, others were rejected. At Frank Paul, one such example is a teacher’s selection of several different technologies to support students as they developed curriculum materials about local minority leaders. At the Open School, teachers integrated technologies to aid students engaged in a year-long City of the Future planning project (Means & Olson, 1994). The authors’ fundamental message in detailing the experience of both of these schools is that, with a reformed culture for teaching and learning already in place and at the center, instructional
technologies were adopted gradually and thoughtfully, utilized effectively, and even shown to advance classroom and school priorities. Teachers and administrators were at the center of the new school culture and were the ones to determine how technologies would be used (Means & Olson, 1994).

Means and Olson (1994) describe research on a third school, the Saturn School of Tomorrow, a magnet middle school in Minnesota. Saturn was built from the ground-up as a high technology environment in which students would partake in a mix of technology-infused teacher-led and collaborative learning projects. Technology integration was approached differently at Saturn in that software and hardware selections were not made selectively or gradually by teachers and administrators. Instead, instructional technologies, what and how they were to be used, were pre-selected and installed into the school as it was erected. Decisions around staffing and staff development were also pre-determined and resulted in an inequitable distribution of resources and expertise (Means & Olson, 1994).

Teachers at Saturn expressed that the technologies were imposed upon them and often made little sense in relation to the teaching and learning goals of the school. As a result, teachers adapted or abandoned many of them. For example, the Integrated Learning System (ILS) laboratory, a state-of-the-art corporate-like training room, was intended by school founders to be central to the goals of Saturn. However, the ILS was never adopted by teachers in the way it was meant and fell to the periphery of daily learning activities (Means & Olson, 1994).

Saturn is an example of a school where the integration of instructional technologies overshadowed the goal of creating a learner-centered and locally-
empowered school culture. The proverbial cart was put before the horse and student and teacher morale and performance suffered as a result (Means & Olson, 1994). Unlike Frank Paul and the Open School, Saturn focused on what we use to learn and change rather than how we learn and change. Process was forsaken for product and the central goal of the school, to develop able and responsible citizens who can continuously grow and advance their own learning, was displaced. Further, teachers and local administrators were set aside as peripheral rather than instrumental to achieving this goal.

The lessons learned by initiatives such as ACOT, Schools for Thought, Frank Paul, the Open School, and Saturn support three arguments put forth by school change theorists and practitioners. First, teachers, administrators, and supporting stakeholders must make central and explicit their goal of helping to develop children as responsible, productive, and lifelong learning citizens in a democratic society (Fullan, 1993a; Glickman, 1993). Second, as agents for continuous learning and improvement, teachers and other stakeholders must develop the knowledge and skills necessary to act as masterful agents for change and lifelong learning (Fullan, 1993a; Jenlink, 1995a). Third, each school must transform itself into an environment that maintains a focus on and fosters the continuous and democratic learning of all members - students, teachers, and all other staff (Fullan & Stiegelbauer, 1991; Glickman, 1993). By pursuing these three objectives, it is thought that a school’s teachers will be able to identify the instructional innovations that are most useful to achieving school goals, they will be open to and know how to evolve practice continuously, and the school will provide fertile ground and adequate resources for change.
Are there models available to implement such a vision of teachers and schools? Are there schools successfully implementing such models, that are practicing the ideas of educational change theorists such as Fullan, Jenlink, Glickman, and others? One model for the learning school is that put forth by the League of Professional Schools in Georgia. The League of Professional Schools is a consortium of approximately fifty schools throughout Georgia who have voluntarily adopted and continue to enact a framework for the learning school. The framework consists of three major components, a covenant for exemplary teaching and learning, shared governance, and inquiry-oriented practice informed by action research (Allen & Glickman, 1998; Glickman, 1993). The work of League schools is supported by League staff and facilitators located within the schools and at the University of Georgia (Allen & Glickman, 1998).

A League school reflects in practice the more recent literature on educational change in five important ways. First, a League school strives to originate change at the school level (Allen & Glickman, 1998). For example, in order for a school to become a member of the League and partake in League services, at least eighty percent of the entire school staff must voluntarily agree to adopt its principles. Subsequently, the entire school staff must develop a school-wide covenant articulating their vision of exemplary teaching and learning (Allen et al., 1999).

Second, a League school works to sustain change at the school and teacher level. A League school is not hierarchical but democratic in its governance. In fact, as a League member, a school's staff establishes a charter for shared governance so that problem-setting and problem-solving occur in an organized yet distributed fashion (Allen & Glickman, 1998; Allen et al., 1999; Glickman, 1993). The charter provides a road map
for who makes what decisions and when. More importantly, it prioritizes decisions so
that those critical to supporting the school's covenant for teaching and learning receive
more and better resources. For example, a League school might dedicate more time to
school-wide discussions about students and learning through regularly scheduled
meetings that promote both within-grade and across-grade collaborations among the staff.
Students may share in decision-making through their own collaborative teams that use the
same operating principles as the adult teams (Allen et al., 1999).

Third, a League school endeavors to focus its school change initiatives on one
priority, improved teaching and learning (Allen & Glickman, 1998; Allen et al., 1999;
Glickman, 1993). This keen focus can be demonstrated in a variety of practices. For
example, collaborative groups might name each group by the work it is meant to
accomplish in order to maintain an eye on the shared purpose. As yet another example,
students and teachers may come together to generate ideas of what a learning classroom
looks like and then post these compilations in individual classrooms, thus creating a
public artifact of the overriding shared goal, to improve teaching and learning (Allen et
al., 1999).

Fourth, League schools strive to embody the notion of a learning school in that
improvement is viewed as evolutionary, continuous, and pervasive (Allen & Glickman,
1998; Glickman, 1993). For example, some League schools have annual book clubs,
where staff members read about innovative teaching and learning practices and then share
their ideas and new practices related to the readings with the rest of the school. Further,
with the help of teachers, students may become aware of and collect data on their own
progress, using this data to monitor and advance their learning over time (Allen et al., 1999).

Fifth, a League school tries to inform itself through ongoing research that is aligned with the school’s priorities and conducted by teachers and administrators within the school (Allen & Glickman, 1998; Allen et al., 1999; Glickman, 1993). A League school uses a critical inquiry model to collect and use data to advance student learning goals on a regular basis. Teachers pursue a continuous cycle of research informing practice and practice informing research, much like what Schon (1983) termed reflective practice, while they coach other staff and students to do the same (Allen et al., 1999).

Limited research conducted on League schools reveals a variety of positive outcomes for teaching and learning including improved academic achievement on both conventional and unconventional measures, lowered drop-out rates, more student-centered learning environments, increased faculty learning and collaboration, distributed decision-making and implementation of innovations, and increased parental awareness and support (Allen & Glickman, 1998; Allen et al., 1999). The League of Professional Schools provides one framework for a learning school where teachers and other stakeholders are central to innovation, acting as empowered agents for change in support of their professional development and the growth of their students.

**Contrasting Notions of Teacher Professional Development and Practice**

For well over fifty years and despite numerous and diverse educational innovations, the United States has struggled with realizing significantly improved teaching and learning in its schools (Fullan, 1993a; Glickman, 1993; Jenlink, 1995a; Means & Olson, 1994). Historically, educational innovations, including initiatives such
as “new math,” “schools without walls,” and “back to basics”, have largely come from outside schools and are, in effect, impressed upon teachers and local school administrators (Fullan & Stiegelbauer, 1991; Glickman, 1993). Externally imposed innovation has often resulted in school-based professionals feeling dispirited and disenfranchised (Fullan & Stiegelbauer, 1991). Such an approach also reinforces the perception of teachers as mere pawns who must be directed by others regarding when and how to change (Carr & Kemmis, 1986; Fullan, 1993a). The way that teachers are developed (and not developed) and the environments in which they teach often constrain them to envision, or at the very least, practice their profession in a highly didactic, reactionary, and isolated manner (Apple, 1991; Carr & Kemmis, 1986; Fullan, 1993a; Nelson & Reigeluth, 1995), often shutting the door to ongoing opportunities for improved practice and heightened levels of professionalism and empowerment.

Yet, research on educational innovation has identified the teacher, along with other stakeholders, as instrumental to changes actually taking hold in the classroom and in schools (Barron et al., 1992; Carr, 1995; Dwyer et al., 1991). Situational issues both within the immediate school environment and society at large have also been found to play a critical role in impeding or advancing teaching and learning improvements (Dwyer et al., 1991; Fullan, 1993a). What can be done to reinvest teachers in their own practice and help them pursue the goal of improved teaching and learning through continual innovation - to establish them as change partners instead of pawns? What must take place for educational change to realize substantial and meaningful progress?

Research findings suggest that teachers (and administrators) must assume new roles in order for education reform to succeed in the United States (Bransford et al.,
They must assume a new paradigm of teaching, learning, professional
development, and school structures (Nelson & Reigeluth, 1995; Perkins, 1986; Schon,
1990). Jenlink (1995a) offers a rationale for focusing on teachers and other individuals in
stating:

The individual is the nexus of the change process. Changing the deep fundamental
structures of a system begins with changing the internal mental structures of
people, their mindsets, which govern and give rise to the external system
structures. This type of change alters the identity relationship stakeholders have
with the system (p. 46).

In line with Jenlink and others, I contend that advancements in educational
change lie in helping educators to reconceptualize teacher development and
professionalism within a strategic or critical framework (Carr & Kemmis, 1986; Valli,
1992; Zeichner et al., 1996). To develop this argument, I will present two traditional, and
largely dominant, views of teacher professionalism, the technical and practical views. It
is important to begin by examining these views in order to comprehend the forces that
have established teachers as a largely disenfranchised group and just how entrenched
these forces are in our history. I will contrast the technical and practical views of teacher
development and professionalism with what Carr and Kemmis (1986) characterize as the
strategic or critical perspective. Further, I will provide an example of what the less
commonly known strategic view might look like in action with teachers.

My goal is to present an argument, supported by exploratory research and
experiential knowledge, albeit limited, for why the strategic view, beyond encompassing
other more traditional approaches, presents a more holistic and useful premise for teacher
development and professional practice than either the technical or practical views. By taking a decidedly sociological perspective, the strategic view fosters teachers who think and act critically as empowered professionals, engaged as lifelong learners in the educational enterprise that is such a cornerstone of our society.

Two Traditional Views of Teacher Development and Professionalism

Historically, there have been two predominant approaches to teacher preparation and professionalism in the United States, a technical view and a practical view (Carr & Kemmis, 1986). The technical view characterizes the teacher as craftsperson whose job it is to develop knowledge of and skill with the means available to enact the teaching craft effectively. Alternatively, the practical perspective views the teacher more as autonomous agent who, guided by experience, acts and reacts in the complex and social world of the classroom to move toward what is good and wise (Carr & Kemmis, 1986).

Perhaps you are familiar with the phrase “teaching is both a science and an art.” Commensurate with this expression, whereas the teacher-technician might be viewed as the mechanic systematically selecting appropriate means to achieve certain ends, the teacher-practitioner might be characterized as the actor-artist reflexively composing and nurturing primarily out of a mix of intuition and experience. In the sections that follow, I provide a description of each approach. I demonstrate the tensions between the technical and practical views, as one approach tends to embrace what the other rejects, and how these tensions can stalemate teacher professional practice and educational innovation.

The technical view. The technical view of education approaches schooling as a series of means that, when discovered and used appropriately, are capable of producing certain ends (Carr & Kemmis, 1986). This view originates out of a positivist paradigm
dating back to the seventeenth century. Since that time, ways of knowing and investigating the world have been increasingly dominated by empirical, reductionist perspectives such as those advanced by the work of Descartes and Newton. From this mechanistic perspective, the world is approached as a machine that can be disassembled through rational and systematic analysis. This deductive, scientific method has been relied on to separate the world into discreet, manageable parts that could then be examined closely and therefore, it is thought, understood and controlled. Such a positivist paradigm has heavily shaped not only ways of inquiry but also approaches to teaching and learning in formal education (Beavis, 1995; Doll, 1989; Prigogine, 1984).

In the positivist tradition, learning was posited as a highly predictable and externally manageable phenomenon and educational practices were developed and evaluated through a very objective point of view (Gagne, 1977; Reigeluth, 1996). By breaking down and understanding the conditions of learning, educational professionals could develop and invoke instruction that caused students to learn. Behavioral psychologists, again focusing on the individual, promoted the use of positive reinforcers to strengthen certain student behaviors and punishments to eradicate other undesirable behaviors (Smith & Moore, 1966). This behaviorist perspective fostered the development of controlled, uniform learning environments with directive teachers, pre-packaged curriculum, and passive learners (Reigeluth, 1996).

Positivist views of teaching were reinforced by a functionalist perspective of schools and schooling which persisted well into the mid-twentieth century, and are still widespread today. Sociologist Emile Durkheim (1956) wrote of the function of schools when he defined education as:
the influence exercised by adult generations on those that are not yet ready for social life. Its object is to arouse and to develop in the child a certain number of physical, intellectual and moral states which are demanded of him by...the special milieu for which he is specifically destined (p. 71).

Functionalists such as Durkheim, Parsons, and others fostered a dominant way of thinking about how to structure schools and schooling so that each adult could eventually assume a necessary and productive role in the modern, urban, and industrial world (Feinberg & Soltis, 1998).

From the positivist and functionalist perspectives, educational researchers simply needed to discover the most effective tools, strategies, and environments to achieve defined educational objectives. Curriculum and media specialists developed and educational administrators selected educational packages that embodied the most efficient and effective means to instruction. Teachers merely put into practice the curriculum that was handed down to them from theorists, developers, and policy makers – a most extreme example of this being the programmed instruction curriculum packages so popular in schools during the 1960s and 1970s (Carr & Kemmis, 1986; Laboratories, 1968). With this perspective, the teacher is removed from the investigation into and development of educational theory and practice. The teacher assumes primarily a role of technician or craftsperson in which he or she selects and applies the most useful educational tools to achieve specified ends. These highly standardized and proscribed educational practices supported the goals of the industrial age in that they encouraged citizens who could live and work effectively in highly bureaucratic and compartmentalized systems (Reigeluth, 1996).
One of the criticisms of a functionalist or positivist approach to education is that it removes thought, inquiry, and action from the realm of its practitioners, teachers. Teachers are trained to use the tools and methods proscribed to them but they are not trained or encouraged to explore, critique, or modify their own profession. Since it is thought that education works to meet the needs of modern society and that any necessary improvements can be made through scientific inquiry that reveals better tools, approaches, and environments, there is little need for teachers to develop beyond the level of technician. There is no need for teachers to ask, for example, “about the purposes of education, the side-effects of unjust traditions or inadequate systems, or the unsettling changes in society which require different kinds of skills, knowledge, and critical capacities in the young” (Carr & Kemmis, 1986, p. 36).

Founded in functionalist and positivist views of education, a technical approach to teacher preparation disempowers its own professionals and clients, promoting a false consciousness of themselves as productive contributors in a social system that works for the good of all (Lemert, 1997). By ignoring the sociological nature of schools and schooling, it also sets up individuals to blame themselves or others, and often teachers, for failures in the system while ignoring the system itself as a potential cause (Lemert, 1997). In effect, it serves as an insufficient basis for teachers (and other members of society) to participate effectively in educational and societal critique and change.

*The practical view.* The practical view, although much less prevalent than the technical view, is a second perspective of teacher professional practice in this country. From this perspective, schooling is viewed as a social, complex, and fluid process that relies heavily on the experience and professional judgments of its practitioners to do what
is thought to be good and wise and true (Carr & Kemmis, 1986). The practical view has ancient ties to the Greeks and “Aristotle’s view of the wise man choosing the right course of action in the political context of the Greek state” (Carr & Kemmis, 1986, p. 17). It also developed in the mid-twentieth century as a formal and popular approach to curriculum and teacher development in reaction to a growing dominance of the technical view. As such, it emphasized practical judgment and reason over pure empiricism and positivism (Carr & Kemmis, 1986; Feinberg & Soltis, 1998).

If the technical view can be thought of as a manifestation of positivist and functionalist paradigms, the practical view can be seen as a representation of an interpretivist paradigm. The interpretivist view, also known as a qualitative or constructivist view, takes a more local perspective than functionalism. To the interpretivist, an emphasis is placed on “what is going on in particular instances of schooling. This requires an interpretation of the ways people think and act in schools” (Feinberg & Soltis, 1998, p. 82). Thus, educational research for the interpretivist focuses on understanding “the various meanings…that constitute and govern the culture of the classroom” (Feinberg & Soltis, 1998, p. 93) rather than proving the superiority of one theory or approach over another. From this world view, the teacher and students act and react to one another within the rich and varied context of the classroom. Teachers are developed to interpret the local scene, call on their professional training and judgment, and adjust their actions fluidly all in the name of helping students develop as rational and moral beings.

The practical view of schools and teacher professionalism can be praised for attempting to balance out the technical perspective that was, during the mid-twentieth
century, becoming increasingly dominant and entrenched in education as the world aggressively pursued modernization and industrialization. The practical view reintroduced the moral and political into education and the classical view of teacher as autonomous and moral agent (Carr & Kemmis, 1986). However, the interpretive nature of the practical view, although often seen as a strength, can also be viewed as a liability for two reasons.

First, this view is so particularistic and contextual that it fails to place adequate importance on the larger forces that impact education and the world of the classroom (Feinberg & Soltis, 1998). In effect, teachers learn ideas and skills that will help them navigate their immediate and local day-to-day interactions but they are not exposed to or expected to master significant sociological issues, such as issues of class, race, and gender, that also impact their professional practice. Secondly, the relativist nature of the interpretivist approach renders it fairly impotent as a means for educational critique and change. Interpretivism essentially stops with the goal of creating and conveying meaning and thus falls short on recommendations or actions toward improvement. Likewise, practical approaches to teacher professionalism are effective at encouraging teachers to interpret and respond locally to students in the classroom but are inadequate at providing them with the skills and knowledge to evaluate and improve their practice and their profession (Carr & Kemmis, 1986).

_Tensions between the technical and practical views._ Educational theorists and practitioners recognize ongoing tensions between the technical and practical views of education and teacher professional practice. Proponents of the technical view point out the educational research that supports certain educational tools and strategies as more
effective and emphasize the criticality of preparing today’s students for an increasingly technological world. Advocates of the practical view emphasize the importance for teachers to be role models and agents for supporting the development of rational, moral, and socialized human beings. Acknowledging this conflict and the incompleteness of either the technical or practical approach, some theorists and practitioners are reaching toward a third perspective of teacher professionalism, one that “recognizes the systemic, institutional and instrumental elements of education, and which also recognizes its practical and moral character” (Carr & Kemmis, 1986, p. 38). This view is named the strategic or critical view.

A Strategic View of Teacher Development and Professionalism

The purpose of the section that follows is to present a relatively new view of teacher professionalism, what is termed by Carr and Kemmis (1986) as the strategic or critical view. In the text that follows, I provide a description of the strategic approach and share a contemporary example of teacher professionalism that is illustrative of many of its aspects. My goal is to demonstrate that the strategic view is indeed an innovative and viable approach to teacher professionalism. Further, the promise of the strategic approach is in its potential to restore a balance of power in education and elevate teachers as owners of their chosen profession and leaders in educational innovation.

A strategic approach to teacher development and professionalism finds its roots in critical theory. Critical theory arose out of the Frankfurt school in Germany in reaction to an increasing disenchantment with the unfulfilled promises of modernization. The first and second World Wars, the Great Depression, and a growing awareness of class, racial, and gender inequities fueled the desire of sociologists such as Horkheimer and Adorno to
“invent a new form of social thinking that took seriously the threats to human life posed by the extreme effects of economic failure, fascism, and war” (Lemert, 1997, p. 89).

Critical theory was not just about a new way of thinking but, more importantly, about emancipation as demonstrated clearly in the work of contemporary critical theorist Jurgen Habermas. Habermas has developed a critical social science that “requires the integration of theory and practice as reflective and practical moments in a dialectical process of reflection, enlightenment and political struggle carried out by groups for the purpose of their own emancipation” (Carr & Kemmis, 1986, p. 144). Critical social science combines theory, processes, and actions so that people can understand and overcome those aspects of the social order that impede them (Carr & Kemmis, 1986).

In the book, *Social Things*, Lemert (1997) describes the strong impact of critical theory on the field of sociology as a reflexive discipline that belongs to all persons, not just intellectuals. As he puts it, sociology constantly “looks back upon itself in order to understand how its own social circumstances affect its knowledge” (Lemert, 1997, p. 95). A strategic view of teacher professionalism is similarly sociological in nature in that it is mindful of teaching and curriculum as being situated within the history, politics, and social constructs of society (Carr & Kemmis, 1986).

The literature conveys the idea clearly that those who influence the structure and goals of education influence the character and development of future citizens (Durkheim, 1956; Feinberg & Soltis, 1998; Parsons, 1959; Pinar, 1993). For this reason, a strategic view of education regards all teaching acts as potentially problematic (Carr & Kemmis, 1986; Valli, 1992). As such, the teaching professional must be able to make sense of and practice the work from a reflective and critical stance. The teacher must have the
knowledge and skills of both a practitioner and a researcher, engaging in a cycle of educational activities that inform educational theories or ideas which, in turn, feed back on and empower him/her to reinvent practice (Carr & Kemmis, 1986). This is one basic premise of a strategic approach to teacher professional development and practice.

Yet another hallmark of a strategic approach is derived from the idea that “educational problems and issues may arise not only as individual matters, but as social matters requiring collective or common action if they are to be satisfactorily resolved” (Carr & Kemmis, 1986, p. 31). Thus, educational research aimed at educational improvement must be derived out of teacher self-knowledge and reflection as well as open and democratic dialogue and action among educational professionals and the larger community (Carr & Kemmis, 1986). Here, a strategic approach to education and teacher professionalism clearly links back to Habermas’ critical social science and its elements of reflection, discourse, action, and emancipation (Carr & Kemmis, 1986).

Given that education is indeed a social endeavor shaped by a variety of external forces (Feinberg & Soltis, 1998; Lemert, 1997), the strategic approach to teacher professionalism appears to make sense. Yet, what might a strategic approach to teacher professionalism actually look like? Have elements of this perspective ever been placed into practice in education?

*The League of Professional Schools.* Carr and Kemmis (1986) articulate their vision of the teacher who assumes a strategic position in regards to practice:

The teacher who regards teaching and curriculum as strategic…submits some part of his or her work to systematic examination….He or she plans thoughtfully, acts deliberately, observes the consequences of action systematically, and reflects
critically on the situational constraints and practical potential of the strategic action being considered. He or she will also construct opportunities to carry this private discourse into discussion and debate with others – teachers, students, administrators and the school community. In so doing, he or she helps to establish critical communities of enquirers into teaching, the curriculum and school organization, and administration with groups within the school, the whole school or between schools (Carr & Kemmis, 1986, p. 40).

Based on my experiences as a graduate assistant for the League of Professional Schools, the framework of the League and the work of its partner schools exemplify in theory and practice many of the tenets of a strategic perspective of teacher professionalism. As discussed previously, the League is a consortium of Georgia schools that have voluntarily adopted and continue to enact a triarchic framework for the learning school. This framework consists of a covenant for exemplary teaching and learning, shared governance, and practice informed by critical inquiry (Allen & Glickman, 1998; Glickman, 1993).

Teachers and administrators in a League school strive to demonstrate a commitment to their profession and ongoing improvement through their covenant for exemplary teaching and learning that is conceived of locally and democratically and revisited regularly (Glickman, 1993). For example, a League school may reconceptualize its covenant through a school-wide collaborative meeting so that newer staff members can learn the history of the school and also participate in its renewal. Through periodic group dialogue and activities, the covenant, which is the driving force behind innovation at the school, remains a living and democratic document that reflects today's staff, ideas,
and realities. The formation and renewal of the League school covenant exemplifies a strategic stance through its methods of communal reflection, discourse, and active revision.

League teachers endeavor to embody the notion of the teacher-researcher so central to a strategic professional perspective. They call on a variety of approaches to open up, inform, and shape educational practices on a continual basis including participation in such activities as book clubs, observations, and conferences (Allen & Glickman, 1998; Allen et al., 1999; Glickman, 1993). For example, if a League school discovers innovative practices that colleagues are using at another school (through a League listserv, newsletter, conference, etc.), that school may arrange an on-site visit to the innovative school to observe and speak with staff members. Thus, the school and larger community not only serve as an environment for student learning but for teacher learning.

The staff at a League school aim for open dialogue with colleagues, both within grade levels and across grade levels, to address critical topics impacting teaching and learning in the school. Such topics may include potential learning innovations, individual child development strategies, and school-wide operational improvements. Further, they use action research as a tool to investigate and improve teaching and learning practices within individual classrooms as well as across the school. Data sources extend beyond traditional test scores to include such things as portfolios, interviews, and exhibits (Glickman, 1993). Beyond the local environment, teachers collaborate with colleagues from other schools, K-16, at off-site professional conferences and on-site visits. For example, League school teachers and administrators from around the state join together at
annual Fall and Spring conferences to present outcomes from action research projects, perhaps on a reading intervention in a particular grade or a new process for consensus-building across a school. University faculty and students also participate in these conferences, extending professional conversations out into the larger educational community.

Through these and other activities, League teachers regularly engage with other teachers and members of the community at large as teacher-researchers to expose, discuss, and refine current thinking and practice (Allen & Glickman, 1998; Glickman, 1993). In this way, teachers engage in what Lemert (1997) characterizes as a powerful and practical sociology that “gives us the first inkling that we are not alone, that we are connected with others even before we recognize the lines of connection, and that we are alive to the world” (p. 26). Freire (1994) reflects a similar stance in claiming:

I can understand [human beings] only as beings who are makers of their 'way,' in the making of which they lay themselves open to or commit themselves to the 'way' that they make and that therefore remakes them as well (p. 97).

In my work with League schools over the past two years, I have witnessed real-world examples of teacher development and professional practice that is strategic in character. Through interactions with each other and university-based professionals, League school members strive to recognize the premise that education is a complex activity which takes place in and is dynamically influenced by a variety of social, cultural, and political forces. By combining new ideas about how to improve teaching and learning with such skills as reflection, discourse, and inquiry, teachers and administrators actively critique and reformulate educational knowledge and practice. In
this way, many League school practices reflect what Carr and Kemmis (1986) describe as *praxis* in which teacher knowledge informs practice and teacher practice, in turn, informs knowledge. Praxis is what Freire (1970) identifies as *fundamental* to human activity and the transformation of structures.

One of the most significant advantages of a strategic approach to teacher professionalism is that it brings teachers out of the isolation of their individual classrooms. It arms them with the knowledge of education as a social endeavor located within a rich, complex, and dynamic context (Carr & Kemmis, 1986) and the communal experience of education at local and broader levels. Further, it fosters abilities such as action research skills that empower teachers as they develop and test new ideas and approaches for their professional practice. This dynamic combination of knowledge and skill is instrumental in positioning teachers as professional researchers and practitioners central to the educational enterprise (Carr & Kemmis, 1986; Valli, 1992). As teachers collaboratively gain in knowledge and skill as teacher-researchers, they will be better prepared to meet the challenges that face them today, including the challenges of educational innovation. They will develop as Lemert (1997) describes, strong sociological imaginations, empowering them to “create imaginative reconstructions of the larger structural forces that affect their lives” (p. 12). In this way, the strategic approach is both emancipatory and empowering.

Teachers and society at large are faced with tremendous challenges (poverty, racism, violence) and opportunities (new technologies and approaches to teaching and learning). They need the knowledge, skills, and power to respond to and even take advantage of these realities of the 21st century. Through a strategic approach to teacher
professional practice, teachers will acquire an epistemology of practice enabling them to innovate more effectively and make informed judgments about their own development and the development of their students. A strategic epistemology will facilitate teachers assuming a stance toward innovation as fundamental to improved teaching and learning. They will be better able to situate innovations within the context of their local goals and work toward improved teaching and learning within the larger context of education in this society. They will have tools such as action research for addressing not just the product but also the process of innovation, using local-derived data to design, assess, and redesign innovations to evolve their practices and the practices of their students.

In 1911, Emile Durkheim communicated powerfully the vital role of the teacher in society and the empowerment the teacher must seek and convey. Durkheim (1956) wrote:

> It is not from the outside that the teacher can hold his authority, it is from himself; it can come to him only from an inner faith. He must believe…in the task and in the importance of his task….The teacher is the great moral interpreter of the great moral ideas of his time and of his country” (p. 87).

A strategic approach serves as a viable source of knowledge, skills, and empowerment for the teacher to comprehend and reassert his/her pivotal position in the classroom and in the world.

**Contemporary Views of Learning as a Social Enterprise**

Over the last two decades, much work has been devoted to understanding learning and professional practice as social phenomena. The terms social learning theory, learning communities, communities of practice, and learning organizations have claimed their
stake in the literature. Why consider learning from yet another perspective? Because, it is our perspectives that shape our designs - or, as Wenger (1998) puts it:

A key implication of our attempts to organize learning is that we must become reflective with regard to our own discourses of learning and to their effects on the ways we design for learning. By proposing a framework that considers learning in social terms, I hope to contribute to this urgent need for reflection and rethinking (p. 9).

The goal of this final section is to explore how perspectives of learning and practice as social and intertwined may contribute to comprehending teachers as innovative practitioners and schools as innovative environments. A social theory of learning is the overriding theory that shifts how we conceptualize and, ultimately, design for instructional technology initiatives, broader educational innovation, teacher professional development and practice, and school structures. This macro-level theory serves to connect and provide a home for constructs drawn out in the three prior sections. As such, a social theory of learning provides the broad theoretical framework that informs this study.

**Situated Cognition Theory**

Emerging from anthropology, sociology, and cognitive science, situated cognition theory represents a major shift in learning theory away from traditional psychological views of learning as mechanistic and individualistic toward perspectives of learning as emergent and social (Greeno, 1998; Lave & Wenger, 1991; Salomon, 1996). Brown, Collins, and Duguid (1989) are often credited with developing situated cognition or situated learning theory. Collins (1988) defines situated learning as “the notion of
learning knowledge and skills in contexts that reflect the way the knowledge will be useful in real life” (p. 2). Thus, situated cognition theory encourages the immersion of learning in an environment that is as close as possible to the “real world” in which new ideas and behaviors will be applied (Schell & Black, 1997).

Regarded as leaders in the “situated cognition movement,” Lave and Wenger (1991) describe learning as “an integral part of generative social practice in the lived-in world” (p. 35). Breaking this definition down, the word “generative” implicates learning as an act of creation or co-creation, “social” suggests that at least a portion of learning time occurs in partnership with other people, and “lived-in world” reminds us that real-world practices and settings help make learning more relevant, useful, and transferable.

Collins (1988) notes four benefits of situated cognition as a theoretical basis for learning. First, individuals learn about the conditions for applying knowledge. Second, individuals are more likely to engage in invention and problem solving when learning in novel and diverse situations and settings. Third, individuals are able to see the implications of knowledge. Finally, individuals are supported in structuring knowledge in ways appropriate to later use by gaining and working with that knowledge in context.

For this study, I viewed situated cognition as providing a basis for exploring the professional lives of innovative teachers in an innovative school. Learning is certainly a part of successful innovation and, I suspect, must operate at a communal level in order to reach across an organization to sustain it as an innovative place. Are the learning perspectives of innovative teachers social in nature? If so, do these perspectives contribute to their ability to innovate and foster an innovative learning environment? As will be detailed in Chapter 3, such questions informed my inquiry process as I selected
research strategies such as individual and group interviews and constructed research instruments including interview protocols.

Communities of Practice

Situated cognition theory’s sociological view of learning finds its expression in a community of practice (Lave & Wenger, 1991). Thus, the main unit of analysis and understanding of how people learn, become, and create is not the individual but the communities that individuals form (Wenger, 1998). Extending this idea to how teachers learn, become, and create, the innovative teacher must be understood within the context of the practitioner communities in which he/she participates, for example, the classroom, the grade level, the school, and any other professional groupings.

Wenger (1998) shares the story of how he and Jean Lave are still debating who first coined the term “community of practice.” Regardless, a community of practice is described by Wenger as comprising three dimensions. First, a community of practice pursues a joint enterprise that is negotiated by its members and requires mutual accountability. Second, a community of practice is mutually engaged through the actions of its members and the agreed-upon meaning of those actions for the group. Third, a community of practice looks to a shared repertoire (of tools, stories, artifacts, concepts, etc.) in order to pursue its practice.

Speaking to the value of a community of practice, Wenger (1998) asserts, “in spite of curriculum, discipline, and exhortation, the learning that is most personally transformative turns out to be the learning that involves membership in communities of practice” (p. 6). Further, Wenger (1998) stipulates that, although a community of practice can be, and certainly is, impacted by external forces:
The power – benevolent or malevolent – that institutions, prescriptions, or individuals have over the practice of a community is always mediated by the community’s production of its practice. External forces have no direct power over this production because, in the last analysis, it is the community that negotiates its enterprise (p. 80).

Imagining that this is so, perhaps it is important to investigate and understand teacher communities in the innovative school. What forms of learning are occurring within and around them? What might be the joint enterprise, mutual engagements, and shared repertoire of innovative teachers in an innovative school? Do these aspects of the practitioner community in some way fuel their ability to innovate? And, if so, how? Again, questions such as these helped guide my research design and process.

Finally, Wenger (1998) makes the important point that communities of practice are not inherently positive or negative but:

They are a force to be reckoned with, for better or for worse. As a locus of engagement in action, interpersonal relations, shared knowledge, and negotiation of enterprises, such communities hold the key to real transformation – the kind that has real effects on people’s lives (p. 85).

The implication of Wenger’s assertion is that a community of practice, although potentially powerful, can as easily harm as well as help. However, if its influence can be understood and leveraged, a community of practice might serve as the wellspring of ongoing innovation. In relation to this study, it was useful to speculate about the role of communities of practice within and between member schools of the League of
Professional Schools. That is, in what ways are the communities of practice that form around League-based principles mechanisms of learning, transformation, and innovation?

*Learning Communities*

A community of practice can be a place for the acquisition and creation of knowledge, a place of learning. However, not every community of practice is a learning community. Wenger (1998) argues that “learning involves an interaction between experience and competence” (p. 214). In order for a community of practice to be a learning community, it must maintain a tension between experience and competence so that learning may flourish and practice may remain fresh. The tension encourages movement in still waters. As such, “a learning community offers an ideal context for developing new understandings because the community sustains change as part of an identity of participation” (Wenger, 1998, p. 215). In other words, change is what the community is about, learning is at the very center of its endeavor.

A community of practice can employ certain means to maintain an appropriate tension between competence and experience and, in the process, foster a learning community. First, the community must view risk-taking as a valued practice that does not threaten membership. A learning community has activity at the center and at the periphery and these activities interact because “it is in these interactions that [members] are likely to find the new experiences and new forms of competence necessary to create new knowledge” (Wenger, 1998, p. 217). Second, community members must engage dynamically in varying degrees of belonging. That is, sometimes, members are deeply engaged in practice and, other times, members use imagination to distance themselves so that they can reflect on practice in novel ways and, still other times, members work to
align their practice and reflection with a bigger, shared picture. Space in the community must exist for all of these modes of belonging to occur. Finally, a learning community must be able to reconfigure itself as identities evolve and circumstances change. They must be able to reconfigure internally, for example, as members come and go and they must be able to reconfigure externally, for example, as political, economic, and cultural conditions change. Members are plugged into their positions within the local and broader communities and negotiate these positions as needed in order to remain vital (Wenger, 1998).

To what extent do the teachers in a school manifest the characteristics of a learning community? Do the existence of learning communities within and in relation to the school foster innovative practice? These are intriguing questions in terms of this study.

**Learning Organizations**

The term learning organization is yet another concept that appears in the literature when considering a social theory of learning. Senge (1990) defines the learning organization as an organization “where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together” (p. 3). Further, he argues that a learning organization is distinguishable in that it manifests five disciplines: the disciplines of systems thinking, personal mastery, negotiated mental models, shared visioning, and team learning (Senge, 1990).

Senge (1990) describes systems thinking as “seeing interrelationships rather than linear cause-effect chains, and seeing processes of change rather than snapshots” (p. 73).
Systems thinking enables organizational members to understand the consequences of interdependency and the processes of change and, consequently, deal with them more effectively. Personal mastery involves continually developing a clear, realistic vision of what is most important and honing one’s energies toward attainment of that vision through lifelong learning. Senge (1990) argues that few organizations foster personal mastery in its members. Learning organizations do. Mental models are simply the deeply held beliefs we have about the world that influence how we act. In a learning organization, members are safe to regularly expose, challenge, and renegotiate their mental models through inquiry and reflection. The fourth discipline, building and articulating a shared vision, binds the members of a learning organization together toward a common goal, a clear image of a desired future. The final discipline, team learning, is grounded in skillful dialogue and is the means by which individuals unite to think, learn, build meaning, and accomplish more than is possible on their own (Senge, 1990).

Senge originated the five disciplines of the learning organization through his work in industry. In a recently published collaborative work, *Schools That Learn*, his work is extended to schools, offering not only a conceptual understanding of the five disciplines but also a plethora of strategies for pursuing them along with examples from schools (Senge et al., 2000). In this literature review, I am not so much concerned with the specifics of this contribution. My goal is to simply point toward a line of work in the realm of social theories of learning that originated elsewhere (in industry) but is now branching toward the work of educational scholars and school-based practitioners. The suggested value of this work and its shift in focus is that it encourages activity not just at the core but at the periphery of our own community of practice. In regards to this study,
the question arises: To what extent do the five disciplines of the learning organization manifest themselves in the professional lives of innovative teachers in an innovative school?

The work of Seashore, Kruse, and Raywid (1996) considers the concept of the learning organization by examining the reform efforts of two schools. Rather than focusing on structural or curricular changes, these schools concentrate on improving teaching and learning by shifting their locus to the daily work of teachers and the culture of the school. The authors assert that a learning school must build the organization’s capacity to learn not just individual skills and knowledge. In addition, it must develop a shared memory of collective understandings that is sustained over time, especially with regard to newcomers. Further, it must create and discuss a shared knowledge base (about teaching and learning, about students, etc.) that draws from individual teacher knowledge, practitioner-driven research at the school, and external expert resources and is interpreted in locally meaningful ways (Seashore et al., 1996).

The authors also argue that school-based innovation requires stronger school-based communities where teachers work closely together. These local communities are characterized by certain behaviors. Teachers consistently communicate shared norms and values in words and action and engage in reflective dialogue about current practice. They share their practice in public ways and by assuming diverse roles (mentor, apprentice, coach, specialist). They focus sharply on student learning and collaborate as a means to share understandings and strengthen relationships (Seashore et al., 1996). Finally, the authors (Seashore et al., 1996) tie the concepts of the learning organization and community together in stating:
When schools are seen as learning organizations and professional communities, attention is focused on teachers’ work as a key instrument of reform. By emphasizing needed changes in the culture of schools and the daily practice of professionals, the reform movement can concentrate on the heart of the school – the teaching and learning process (p. 9).

The work of Seashore, Kruse, and Raywid converges with other ideas reviewed in this chapter to produce certain themes that appear to be keys to successful innovation in teaching and learning at the school level. These themes include the centrality of teacher work, a strategic professional practice, and rich and diverse learning communities to the innovation process.

**Summary**

I began this chapter by stating that I wanted to investigate the literature in order to answer four questions:

- What insights does recent research (since the mid-1980s) on school-based instructional technology (IT) initiatives have to offer regarding the role of the teacher in successful innovation?

- What does the recent literature (from the 1980s to the present) on school change theory, research, and practice contribute to our understanding of teachers as successful innovators and schools as innovative places?

- How do traditional and contemporary notions of teacher professional development and practice impact the role of teachers as innovators and schools as innovative?
• What do more recent ideas about learning as a social enterprise have to contribute to the realization of teachers as innovators and schools as innovative environments?

To summarize my journey through the literature, recent research in school-based instructional technology initiatives, including ACOT and Schools for Thought, identify the teacher as central to successful innovation. The teacher is the local and immediate agent for changing teaching and learning practices in the classroom. As such, any person, group, or organization concerned with school-based innovation must concern themselves with the teacher and, especially, those issues impacting teacher professional development and practice. Indeed, some instructional technologists advocate for a reconceptualization and redesign of teacher practice and school environments as a requirement for successful innovation to take place. However, as a community, instructional technologists appear to lack a shared and meaningful language for examining broad issues of educational change.

Recent literature in the area of school change also identifies the teacher as central actor in successful innovation and, as such, argues for a keen focus on the professional development and practice of teachers and the reculturing of schools in order to effect and sustain school-based innovations. Theoretical work in this area suggests that the teacher must be reconceptualized as lifelong learner and local change agent and school environments must be reconceived as continuous learning organizations. Further, this domain provides an example from practice, in the form of the League of Professional Schools, of how the members of a school can organize themselves and their practice into an innovative community of practice, a learning community that is focused on ongoing improvements in teaching and learning. Although theoretically rich and offering some
promising practitioner-based constructs, the educational change literature does not appear to provide a strong research base for understanding the role of teachers and schools in innovation.

Shifting the focus directly to teachers, the literature reveals that conventional approaches to teacher professional development and practice restrict the innovative capacity of teachers and the environments in which they work, schools. A technical model reduces the teacher to one who mindlessly enacts the reforms of others who reside outside of daily practice – others who may or may not possess educational expertise or experience. A practical model pushes back on the technical, encouraging teachers to interpret and respond locally to students in the classroom. However, it is inadequate in fostering teachers’ skill and knowledge development to evaluate and improve their practice and the conditions of their profession. The more novel strategic view of teacher professional development and practice cultivates teachers who think and act critically, engaging as empowered and lifelong learners in education as an innovative, social, and dynamic enterprise. Further, the League of Professional Schools provides a vision of what this view can look like in practice. However, this vision lacks a strong empirical foundation and is based largely in practitioner reports and my own work experiences as a graduate assistant with the League.

Finally, a look into contemporary notions about learning, communities of practice, and learning communities furnishes a socially-oriented understanding of the potential characteristics of teachers who initiate and sustain innovation and schools that foster innovative practice. Indeed, social learning theory provides a useful theoretical framework at the macro-level for attempting to understand the nature of innovative
teachers and innovative schools. Do they behave as lifelong and socially engaged
learners? Are they members of a learning community whose very core enterprise is
indeed learning? Do they operate within a community of practice that enacts a shared
repertoire to mutually engage in pursuit of a joint enterprise? Does their environment
resemble a learning organization where systems thinking, personal mastery, flexible
mental models, a shared vision, and team learning converge? What else is going on with
them and in their schools? What does the literature not address? My goal is that this
study lends insight into these constructs and, ultimately, fosters more research that
contributes to the expansion and sustainment of innovative school-based teaching and
learning practices. If the ground is fertile, the seed will take root.
Chapter Three

Methodology

The purpose of this study was to explore the dimensions that foster and sustain teachers as innovators and schools as innovative places for improved teaching and learning by studying an exemplary League school known for its innovative practices in teaching and learning. In this chapter, I describe the methodological design for this research. In doing so, I refer to the research setting and participants. In keeping with the ethical considerations of this research, I maintain identity confidentiality by using pseudonyms in the text for the school and participants.

I chose a qualitative methodology for the study. Qualitative research is naturalistic inquiry, seeking to understand real-world situations in an unobtrusive and non-directive manner through richly descriptive and emergent methods (Merriam, 1998; Patton, 1990). Qualitative research is characteristically inductive, posing research questions that are open-ended and oriented toward discovery (Bogdan & Biklen, 1998) rather than causal explanation. The researcher, serving as the primary instrument of qualitative data collection and analysis, seeks to collect information by speaking with and observing participants in their setting (Bogdan & Biklen, 1998; Patton, 1990). A qualitative methodology was the most appropriate selection for this study because I, as researcher, was seeking to understand a complex intrapersonal and interpersonal phenomenon situated within a larger context. I was studying the dimensions that foster and sustain
teachers as innovators and schools as innovative places for improved teaching and learning in a school known for its innovative practices in teaching and learning.

Design of Study

The selection of a methodological design is guided by what a researcher wants to know (Merriam, 1998). The case study has been identified as a qualitative design that is distinctively advantageous for answering “how” questions (Merriam, 1998; Yin, 1994). My research endeavor was guided by one overarching research question: How does one school known for its innovative practices in teaching and learning foster and sustain community members as innovators for improved teaching and learning? With such a question in mind, the case study was an appropriate design for this research.

Yin (1994) defines the case study as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (p. 13). Further, he points out, “As a research endeavor, the case study contributes uniquely to our knowledge of individual, organizational, social, and political phenomena” (Yin, 1994, p. 2) and it “allows an investigation to retain the holistic and meaningful characteristics of real-life events” (Yin, 1994, p. 3).

In Chapter 2, the literature review for this study identified that both the practice of teachers and the school environments within which teachers work hold consequences for innovation in teaching and learning (Dwyer et al., 1991; Fullan, 1993a). In order to investigate both individual and environment and the interplay between the two, I determined that it was important to explore the dimensions supporting innovation in one school setting. The literature also identified educational innovation of any kind as
complex and systemic (Fullan, 1993a; Hansen, 1995; Jenlink, 1995b). As such, it was important for me as the researcher to approach this study with multiple layers of complexity in mind, including perspectives and experiences at the individual, cohort, and organizational levels. (In this study, I viewed a cohort as any formal or informal group smaller than the entire school community). Considering the definition offered by Yin (1994), the case study approach provided the most suitable research design for investigating the dimensions supporting teaching and learning innovation within the constructs of teacher practice and school environment while honoring the complexity of the phenomenon in enabling exploration at multiple layers.

Merriam (1998) states that "the single most defining characteristic of case study research lies in delimiting the object of study, the case" (p. 27) in order to indicate clearly what will and will not be studied. Further, she describes a case as a "unit around which there are boundaries" (p. 27). The object of study, or unit of analysis, for my research was an elementary school. A school, being a single social system around which there are distinguishable boundaries, clearly meets Merriam's (1998) criteria for a case.

This study is further characterized as an interpretive case study. The interpretive case study seeks to richly describe a particular phenomenon and provide conceptual categories so as to enlighten a reader's understanding of it through a written report (Merriam, 1998). In subsequent chapters of this text, I used participant quotations, event descriptions, artifact excerpts, and researcher log reflections to first describe the school studied and later to illuminate the dimensions that foster and sustain the school community as an innovative place for teaching and learning.
Researcher's Role and Analytical Frame

It is important for a researcher to understand and communicate his/her role in a study. In this study, I was immersed in the culture of the school for over 20 days. I was not hidden to the members of my study; thus, I assumed a participatory role. However, my role as observer superceded my role as participant as I was never fully a member of the Brownlee school community (Merriam, 1998).

A researcher's analytical frame is how that researcher “sees the world” and will therefore approach a study including processes for data collection and analysis (Merriam, 1998). For this study, my analytical frame was informed by an ethnographic perspective and, to a lesser degree, by elements of systems theory. The central question of an ethnographic perspective is: “What is the culture of this group of people” (Patton, 1990, p. 67)? Culture is that group of beliefs and behaviors that make up “standards for deciding what is, standards for deciding what can be, standards for deciding how one feels about it, standards for deciding what to do about it, and standards for deciding how to go about doing it” (Goodenough, 1971, p. 21). This focus on culture certainly supported my investigation of teachers as innovators in an innovative school setting, particularly in forming interview questions for data collection and developing a framework, through data analysis, for describing how Brownlee community members "do school."

With culture as a focal point, data analysis in an ethnographic study stretches across multiple data sources to weave the data into themes that are described richly and thickly. As described later, I analyzed four sources of data in an integrative manner in conducting this research. Further, typologizing is often characteristic of data analysis
from an ethnographic frame. A typology is useful when the themes emerging through
data analysis appear to be interconnected (Merriam, 1998). In the case of this research,
cognitive maps, flow charts, or other diagrams were developed as part of the data analysis
process to investigate the connections between identified themes.

To a lesser degree, my analytical frame was informed by a systems perspective.
Systems theory focuses on the question: "How and why does the system function as a
whole" (Patton, 1990, p. 88)? In attempting to answer this question, systems theory takes
into account both individuals and environments. Further, a systems perspective is
“important in dealing with and understanding real-world complexities, viewing things as
whole entities embedded in context and still larger wholes” (Patton, 1990, p. 78). A
systems frame influenced my strategy to collect and analyze data at multiple layers - the
school, the cohort, and the individual. A systems frame also influenced, along with the
literature review, my construction of a preliminary framework of factors that might
sustain teachers as innovators and schools as innovative places (see Appendix A for A
Preliminary Framework of Factors Sustaining Innovation). Finally, a systems frame
supported typologizing as a strategy for data analysis in order to examine complex
relationships in a holistic manner, a hallmark of a systems approach (Patton, 1990).

Researcher Biases

As described in detail in Chapter 1, it is important for a researcher to expose and
examine his/her biases, or subjectivities, throughout the course of a study in order to be
aware of and purposefully manage their influence on the research. Further, a researcher's
subjectivities are, in themselves, a useful source of data that can provide insights into the
research at hand for the researcher and its readers. For these reasons, it is vital for a
researcher to not only call on strategies for the self-critique of his/her biases but also to insert these biases into draft and final reportings of a study so that readers have the opportunity to participate in and contribute to the critique as well (Maxwell, 1996; Peshkin, 1988; Richardson, 2000; St. Pierre, 1997).

In general, I purposefully exposed, examined, and managed my subjectivities through the strategies afforded to me by the qualitative research tradition. These procedures included detailed researcher logs, participant member checks, and peer reviews. Throughout the data collection process, I made daily researcher log entries regarding my personal thoughts and experiences regarding the study, how these thoughts and experiences might be biasing the research itself, and the actions that I would take to counterbalance potential biases. Beginning with data collection and continuing through the report-writing process, I used member checks in two ways. First, while still in the field, I would verbally feed back my findings and interpretations to date to participants in one-on-one and group conversations, asking them to confirm, revise, and/or refute them in the process. Second, I submitted draft reports of my findings and interpretations, along with a Review Checklist adapted from Stake (1995), requesting that participants provide a critique of the drafts for inclusion in the final report. In terms of peer reviews, during the analysis and write-up of my research findings, I submitted my drafts to two fellow doctoral students for critique. Each draft submission was followed by a meeting with these peers to discuss their feedback, including regarding those issues addressed on the Review Checklist - the appropriate and sufficient use of language and data and the explication of research methods and biases. Again, I incorporated this feedback into the final report (see Appendix B for the Review Checklist).
Throughout the research process, I identified three biases in relation to this study. First, working as a trainer and teacher for over fifteen years in a variety of settings, I have a favorable bias toward teachers and teaching as a profession. In particular, and as detailed in Chapter 1, I feel a sense of advocacy for teachers in K-12 schools. This advocacy is rooted, in part, in my experiences with K-12 teachers as I pursued a masters degree in Instructional Systems at Pennsylvania State University.

In this degree program, class participants were quite evenly distributed between teachers from K-12 and teachers (or trainers) from industry. Working, at the time, as an instructional designer and trainer for a large corporation, I belonged to the latter group. In my regular interactions with the K-12 teachers, I came to understand that, generally, these teachers were hamstrung in their work in comparison to industry teachers in two ways.

First, I discovered that my K-12 colleagues were not afforded the ongoing knowledge and skill development opportunities in their professional practice that I, and my industry colleagues, had access to (and were expected to utilize) in our work lives. Second, K-12 teachers were not provided with the resources (time, money, materials) and responsibilities (leadership roles, managerial roles) that enabled those of us in industry to execute our jobs and grow professionally. I found these realizations troubling and, since this time, have taken the position that improvements in teaching and learning in schools might be positively impacted if K-12 teachers did have opportunities to engage with some of the same knowledge, skills, resources, and responsibilities that their industry counterparts did. In fact, this sense of advocacy for heightening the professional lives of teachers served as one impetus for pursuing a doctorate so that I could work more closely with K-12 teachers and the K-12 teaching profession.
In relation to this study, this positive bias toward K-12 teachers had the potential of influencing me in terms of, as one committee member put it, "only seeing what I wanted to see." I took measures to counter this threat through researcher log entries, peer reviews, and participant member checks. For example, approximately halfway through the data collection process, I noted in a number of log entries how, as I became familiar with participants, I felt a growing fondness for them that I recognized was rooted, in part, in my advocacy for teachers and teaching. Further, I recognized that this fondness could unduly influence my experience with and interpretation of the school. At that time, I chose to counterbalance this growing fondness by consciously distancing myself from participants. In fact, I took a break from the field. Additionally, I renewed my commitment to looking for contrary occurrences at the school and examining these at length through my log activities.

Some may consider my prior positive experiences with League schools, including the school studied, as a second potentially harmful researcher bias. Thus, I explicate my working relationship with the League and League schools here and revisit it prior to reporting my research findings in Chapter 4. From the Fall of 2000 through the Spring of 2002, I worked part-time (5-7 hours/week) for the League of Professional Schools as a graduate assistant. As a result, I had many positive interactions with League school members through League activities including conferences, meetings, and school visits. In fact, during my first year on staff, I worked on a project for the League that involved the school that I ultimately secured for this study.

I first visited the school that ultimately became the research site for my dissertation study in the Fall of 2000 with Lew Allen, Co-Director of the League of
Professional Schools. Lew had asked me, as a part-time graduate assistant at the League, to participate in a new venture, the construction of a small, web-based representation of a League school. To complete the project, Lew and I spent a number of days through March of 2001 speaking with and observing members of the school in action.

On-site at the school, I engaged in very limited direct conversation with staff and students. Rather, my function was a supportive one to Lew. Specifically, I assumed three roles in this project. First, I observed and recorded notes as Lew led individual and focus group interviews with the staff. Second, I observed classroom and school practices as I collected photographs and images for the site. Third, I designed and developed the web site.

To be frank, my position has always been that my prior experience with the school in question was not a significant issue in terms of this research for three reasons. First, given my secondary role on the project and the limitations of the project itself, my interactions with school staff members were very limited. (In fact, it did not surprise me when I discovered later during my study that many school staff members did not recall or were not aware of my involvement in the web site project.) Second, at the time of the project, I had not identified the object of study for my dissertation. In fact, I did not develop the goals and the plan for my dissertation research until the Fall of 2001. By this time, I had accumulated positive interactions with a number of League schools that did inform my decision to study a League school. Third, nine months had transpired between my last visit to the school for the web site project and my decision to approach them, along with another League school, as a potential site for my research. In sum, I believe that my prior experience on the web site project resulted in no significant relationship, be
it positive or negative, with the school or its staff members. (In fact, I had a stronger positive professional relationship with the assistant principal from the other school considered for this research.) As such, I believe it presented no personal bias or advantage of import. Further, as detailed in the next section, I did not consider "prior work experience with the school" as a criterion for site selection. However, in the interest of due diligence, I expose the relationship here so that the reader is informed and can form his/her own impressions.

A third research bias having the potential to influence this study was my entering into this research with certain conceptual categories in mind. Specifically, in developing the plan for my dissertation study, I conducted an in-depth literature review. This review, along with my prior experiences with League schools, and previous work experiences in industry, led me to develop certain constructs at the organizational, cohort, and individual levels that I suspected I might encounter in collecting and analyzing the data from my dissertation research. These constructs are represented in Appendix A.

As it turned out, my primary application of this typology was in using the organizational, cohort, and individual categories to organize my interview protocol to ensure that I was approaching the study systemically, examining all three of these layers in my questions to participants rather than just one or two. Beyond this application, I soon found the framework rudimentary and restrictive and did not revisit or apply it during the data collection, data analysis, or write-up of the research findings and conclusions.

Revisiting this diagram now, as I examine and explicate my research methods, I realize that I did apply certain concepts listed in the framework as I wrote up my findings.
and conclusions. For example, in writing Chapter 4-6, I revisited Wenger's (1998) conception of the learning community, a concept that was originally included in the framework in Appendix A. However, I did not refer to my framework during the writing process. Rather, I looked directly to the research literature.

Research Setting and Participants

Merriam (1998) identifies purposeful sampling as the most appropriate strategy for site and participant selection in qualitative research in that the researcher "wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned" (p. 61). In purposeful sampling, the researcher identifies the criteria essential to pursuing the purpose of the study. I used a form of purposeful sampling known as unique sampling (Merriam, 1998) to select the research setting and participants for this study. Unique sampling was appropriate because I needed to identify a school and participants known to be innovative in teaching and learning practices, an arguably rare attribute by its very nature.

Site Selection

Three criteria were used to select a site for this study. First, the school had to be a member school of Georgia's League of Professional Schools. Having worked as a graduate assistant for the League for two years, I was familiar with the principles of the League and had observed and interacted with staff members from a number of League schools. Through my experiences, I was aware that League schools embody many of the traits identified in the literature as vital to successful innovation in teaching and learning. These traits included teachers operating as the central agents for innovation through a strategic professional practice distinguished by shared inquiry as members of a learning
community (Allen et al., 1999; Seashore et al., 1996). Further, given the goals of this research, Lew Allen and Frances Hensley, Directors of the League, each expressed their support for this criterion as a viable choice.

The second criterion for site selection was that the League school had to have an established reputation for innovation in teaching and learning practices. This criterion was set because I was exploring the dimensions that foster and sustain teachers as innovators and schools as innovative places for improved teaching and learning. I needed to study an exemplar in teaching and learning innovation in order to identify these dimensions.

I used four sources of evidence to meet this second criterion. First, after describing the purposes of my research, I asked Lew Allen and Frances Hensley for site recommendations. Second, as a graduate student for the League, I considered schools based on my observations of and interactions with member schools through League activities over the last two years. These activities included conferences, meetings, and school visits. Given these two steps, I identified two potential schools, Brownlee Elementary and Skylar Elementary. As a third step, I felt it important to include an informed yet outsider perspective. Reviewing the goals of the research and describing the attributes of each school, I consulted with three of my committee members who are not directly affiliated with the League. Fourth, I visited each of the two schools to propose the research and elicit initial reactions from administrators.

A third selection criterion was associated with the nature of teaching and learning innovations taking place at the school. The school's selection and use of innovations had to manifest certain instructional technology principles and practices. I did not consider it
feasible or necessary to establish an exhaustive list up front. However, I did identify
certain elements including teachers acting as designers of learning environments that
flexibly met learner needs and learning goals and appropriately integrated the learning
resources afforded. With a degree in Instructional Technology and fifteen years of
experience in the field, I felt qualified to make this judgment. Further, having observed
and spoken with a number of staff members from both schools over two years, I felt
confident that this criterion would be met by either choice.

Ultimately, I selected Brownlee Elementary as the site for my research. Three
experiences influenced my final choice. First, given the goals of the study, the impression
of each committee member consulted was that Brownlee would be a better fit. I agreed
with their perceptions. Second, and more significantly, although both schools indicated
during my visit that they would be willing to participate, the Brownlee administration
expressed a much higher level of interest in the study. Further, during my visit, Brownlee
school staff manifested traits of an innovative school, as described in the literature. For
example, although I only requested a meeting with my initial contact person, the
principal, all three Brownlee administrators met with me as a group to discuss my
proposal. In that meeting, we collaborated on refining the teacher participant selection
process. Further, Brownlee's administrators expressed that participation in the research
would likely facilitate the writing of a book about their school, a grant-funded project
already underway in the school community. In this initial meeting, Brownlee had already
demonstrated to me traits of shared governance, collaboration, and professionally
enriching boundary practices. My decision was made.
Participant Selection

The original design for this study called for seven participants, two administrators (the principal and assistant principal) and five teachers. I needed more than one administrator to provide a balanced view at this level of school organization. I chose five teachers in pursuit of a representative spread among the grade levels. Further, I felt that this number would lend enough data so as to provide a thick description of the school and saturate conceptual categories (Merriam, 1998).

Once Brownlee was selected and, given the collaborative nature of that first meeting, I decided that all three of Brownlee's administrators (the principal and two assistant principals) should be included in the study. I invited them and they agreed. Thus, my original number of participants increased by one.

Next, it was time to select the teacher participants. The main criteria for teacher selection were three-fold: at least three years of work experience at the school; a reputation among school colleagues as an innovator in regards to diverse and educationally sound teaching and learning practices; and an active and positive agent for change school-wide. The criterion of three years at Brownlee ensured that teachers were acclimated to the school while still allowing for both senior and junior faculty to participate. The second criterion of innovator originated directly from the purpose of the study. The third criterion of a school-wide change agent was included to account for teacher-innovators as generally public in their practice, a trait identified in the literature.

I developed a survey in order to identify teacher participants. The survey provided a description of the second and third criteria and asked Brownlee staff members to anonymously identify five teachers in the school who met the criteria for educational
innovation and school-wide change agency (see Appendix C for Survey for Participants). Prior to giving the survey, I asked Brownlee's three administrators to review it for changes and, given the culture of the school, to suggest the best mode of administration, web-based, email, or in person. The administration felt it important that I administer the survey in person at a school-wide meeting so that staff members could meet and talk with me. I did so at a school-wide gathering on January 8, 2002.

I compiled the survey results in Microsoft Excel and then, once the school's county approved my study two months later, individually invited the top five teachers to participate via email. I asked each teacher to indicate her consent to participate by reading and returning via regular mail a consent form attached to the email (see Appendix D for Invitation to Participate and Informed Consent form). I chose to do this as a means for securing five teachers in a cumulative fashion. If a teacher did not consent in writing, I then invited the next person from the survey results.

From the original field of five, two teachers declined to participate due to heavy commitments with their own educational pursuits. I invited and secured the next two teachers on the list after which one of the original five teachers agreed to participate given that I planned to be flexible with meeting dates. The number of participants increased again by one, producing a final result of three administrators and six teachers.

The group included eight females and one male and represented a good mix of grade levels. Eight of the nine participants were Caucasian. With the exception of Claire, all participants met the minimum requirement of three years at Brownlee. In retrospect, Claire's participation proved advantageous in offering a contrast to participants who were
more established members of the community. Further descriptive data for each study participant is included in Table 1.

Table 1. Participant Descriptive Data

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Current Position</th>
<th>Education, Highest Level</th>
<th>Years, PreK-12</th>
<th>Years, Brownlee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claire Todd</td>
<td>43</td>
<td>Fifth Grade Teacher</td>
<td>Specialist</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Marie Conlin</td>
<td>38</td>
<td>Fourth Grade Teacher</td>
<td>Masters</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Jane Calamity</td>
<td>52</td>
<td>PreK Special Education Autistic Teacher</td>
<td>Masters</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>Ann Stewart</td>
<td>31</td>
<td>Second Grade Teacher</td>
<td>Specialist</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Hope Sprinzen Turnel</td>
<td>52</td>
<td>Reading Specialist/First Grade Teacher</td>
<td>Specialist</td>
<td>21</td>
<td>5</td>
</tr>
<tr>
<td>Barbara Brady</td>
<td>45</td>
<td>Gifted Education Teacher/Technology Coordinator</td>
<td>Specialist</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>Diane Shephard</td>
<td>49</td>
<td>Assistant Principal</td>
<td>Specialist</td>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>Jack Hoover</td>
<td>37</td>
<td>Assistant Principal</td>
<td>Specialist</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Emma Adams</td>
<td>47</td>
<td>Principal</td>
<td>Doctorate</td>
<td>19</td>
<td>5</td>
</tr>
</tbody>
</table>

Data Collection

Yin (1994) expands the definition of the case study in stating:

The case study inquiry copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result, relies on multiple sources of evidence, with data needed to converge in a triangulating fashion (p. 13).

In qualitative data collection, triangulation is described commonly as using multiple sources of data and multiple methods of data collection (Bogdan & Biklen, 1998; Maxwell, 1996; Merriam, 1998; Patton, 1990). Triangulation enables one to
balance the strengths and limitations of one data source/collection method with those of another (Denzin, 1978) and to collect layers of data that will assist in discovering themes during the analysis process (Lawrence-Lightfoot & Davis, 1997).

Data Sources

To reap the benefits of triangulation, I used four sources of data: interview transcripts, field notes, artifacts, and researcher log entries. I distinguish researcher log entries from field notes in that, generally, log entries were recorded outside of on-site data collection activities such as observations or interviews. I further distinguish log entries in that they were often highly reflective in nature.

Data Collection Methods

Multiple methods of data collection also supported triangulation. I used five methods of data collection: individual participant interviews, focus group interviews, field observations, artifact collection, and researcher self-interviews. Researcher self interviews were not part of the original study design. Rather, they emerged during the data collection and analysis process out of circumstances that, ultimately, proved to be very useful to the research.

I spent over 20 days at Brownlee. The commute to the school was approximately one hour by car. With the pressure of a compressed data collection and analysis schedule, I realized early on that I could use this commute time to interview myself regarding both the products and processes of the study as it progressed. These self-interviews became part of my data collection routine, occurring both on my way to the school and back to Athens.
Data Collection Schedule of Activities

Data collection activities spanned 10 weeks from mid-March to late May. In these 10 weeks, I spent 22 days at the school (see Appendix E for a detailed Schedule of Completed Research Activities). I organized my time in the field into two rounds. Round I of data collection extended from March 21 through April 17. During Round I, I completed the following activities:

- Shadowed each participant for one full day, attending a variety of meetings and collecting many different artifacts as they arose in situ.
- Interviewed each participant privately.
- Facilitated one three-hour focus group.
- Interviewed myself during the commute to and from the school.

Round II of data collection took place from April 16 through May 24. During Round II, I:

- Shadowed each participant for a second full day, attending a variety of meetings and collecting many different artifacts as they arose in situ.
- Facilitated a second three-hour focus group.
- Interviewed myself during the commute to and from the school.

The activities completed during Rounds I and II are described in detail in the following sections, making particular note of the protocols used, any changes to the original study design, and any unexpected events.

Individual participant observations. According to Yin (1994), direct observation of events within the environment under study enables the researcher to witness and
record data on real events in real time within the lived context. As noted previously, I
shadowed each participant for one day during Round I and one day during Round II. As I
shadowed a participant, I observed all activities that the participant engaged in including
classroom teaching and learning, scheduled meetings, and impromptu events. Further, I
recorded extensive field notes (Bogdan & Biklen, 1998) and collected artifacts as they
arose in situ.

During observation days, I used transitional time to ask follow-up questions and
member check data and evolving perceptions with the participant. I also used this time to
fill-in my field notes, or just engage in conversation with staff members as we came
across one another. In addition to building rapport and providing additional anecdotal
data, this last activity facilitated the staff coming to see me over time as just part of the
local scene, as evidenced by staff occasionally engaging me spontaneously in school
work (helping to assemble chairs in the media center, etc.) As it turns out, observation
proved to be an extremely valuable method for witnessing, first-hand, evidence of what I
had heard Brownlee staff speak of in interviews.

Artifact collection. As yet another means of data collection, the collection of
artifacts is a useful strategy because artifacts are stable and can be reviewed repeatedly,
are native to the setting, contain significant detail, and allow for a broad coverage of time,
events, and settings. Further, they often provide great insight into the operations and
culture of an organization (Yin, 1994). At Brownlee, most of my collection of artifacts
arose directly out my interaction with staff members. In my time at the school, I collected
well over fifty artifacts. I examined a diversity of materials including such things as
organizational charts and models, summaries of assessment data, customized assessment instruments, teacher materials, and student work.

*Individual participant interviews.* According to Yin (1994), two advantages of the interview as a data collection method are the ability to focus on the major topics of the case study and the opportunity to gain insight through declaratory as well as inferential data. During Round I, I interviewed each participant in a private setting for what was to be a maximum of 60 minutes but proved to run closer to 90 in most cases. Once in the field, I discovered that participants were very enthusiastic and interested in talking about their practice and the school. Although I periodically reminded each participant that they were only committed to 60 minutes, I decided to follow the participant's lead when it came to how long we talked.

For efficiency's sake, each individual interview took place as part of the participant's first scheduled observation day. As such, I was very flexible with when during the day the interview took place and whether it was done in one sitting or broken into 30-minute blocks. Participants seemed to appreciate this flexibility.

I took field notes during interviews. Further, each interview was audiotaped and subsequently transcribed (Bogdan & Biklen, 1998). I used the same general protocol for each individual interview, addressing all categories of questions with each participant (see Appendix F for the Interview Protocol). The categories ensured that I would cover major concepts of interest in the study including stories of innovation and the individual, cohort, and organizational aspects that facilitated successful innovation in teaching and learning. The format for each individual interview was as follows:
1. I began the interview by reviewing the informed consent form, fielding any outstanding questions from participants about the study (that were not already answered via email), and confirming receipt of a signed copy of the form. I also asked participants to furnish a pseudonym at this time.

2. I explained the format of the interview and established the context by reading an opening statement about the goals and rationale of the research, checking for understanding in the process.

3. I covered the first general category of interview questions regarding participant background information. After that, I used the interview protocol as a self-monitoring guide to ensure that all major categories of interview questions were covered.

During the first interview, I attempted to follow the interview protocol in a linear fashion but found this approach too restrictive, inhibiting the natural flow of conversation. Thus, from that point forward, I adopted a semi-structured format (Seidman, 1998), following each participant’s lead in terms of the major topic area to move to next. This proved to be an effective strategy for maintaining a more relaxed atmosphere and keeping both the participant and myself at ease.

It is important to note that I developed the interview protocol as a tool for me and, as such, it is reflective of my preference as a researcher to limit the structure built into such an instrument. For example, I built the instrument purposefully listing alternative approaches to the same basic questions under each major category of interest. In conducting each interview, my goal was not to ask every question listed under each
category. Rather, the goal was to cover every category using the questions listed as a guide.

Finally, the original study design called for two individual interviews, one during Round I and another during Round II. However, about two thirds into the first round of interviews, I began to suspect that I did not need the second round of interviews in order to pursue the purpose of the study. In fact, I felt confident that any individual follow-up questions could be addressed during my second observation visit or via email (a communication tool that Brownlee staff use frequently and with ease). At the close of the April 12 focus group interview, I informed the group of this development and proposed the idea of substituting a second focus group meeting for the second round of individual interviews. Ann was the first to show support for this idea, indicating that another focus group would probably prove more useful to me than more individual interviews since, as she pointed out, it is just how they work at Brownlee - that is, together. Several of her colleagues nodded in agreement. None of the participants expressed opposition to this potential adjustment in activities.

I took my suspicions as researcher, now supported by a number of study participants, as my cue to speak with my committee chairperson and another committee member about adjusting my data collection strategies for Round II. Both expressed that the change was a reasonable modification and deferred to my judgment for the final decision. I notified participants that I would not be conducting a second round of individual interviews but would like to schedule a second focus group. They agreed with this change in plans.
Focus group interviews. Focus groups are useful in that they "can yield a great deal of specific information on a selected topic in a relatively short period of time" and "offer new dimensions to data collection because of their emphasis on dynamic group interaction" (Vaughn, Schumm, & Sinagub, 1996, p. 13). I found these aspects of focus groups to be particularly useful in this study in order to collect stories about numerous innovations that Brownlee had implemented over the years and to observe cohort-level interactions among participants. I facilitated two three-hour focus group sessions, one on April 12 during Round I and one on April 22 during Round II. I used a focus group protocol (specific origin unable to be determined) adapted from one that I and former colleagues had used in industry (see Appendix G for the Focus Group Protocol).

The intent was for the first focus group to include all participants and occur prior to the Round I individual interviews. However, scheduling nine staff members for three hours proved even more challenging than I suspected, in part, due to standardized testing schedules. As a result, the first focus group occurred after seven individual interview/observation days were completed. Further, it did not include the principal, Emma Adams, or the assistant principal, Diane Shephard.

As noted previously, given the prolific nature of the first focus group and what I had learned about how Brownlee staff interact, I scheduled a second focus group for April 22. Another reason for this change in plans was that we did not complete the full protocol during the first meeting. (As noted, Brownlee folks are prolific, especially when interacting in a group setting.) A second focus group meeting provided an opportunity to complete the steps of the protocol.
The second focus group included all six teachers. Due to unanticipated events at the school and in the county, the three administrators participated on a very limited basis, joining the group for short periods of time. However, I do not view the administrators' limited participation in the focus groups as detrimental to the study because, per the protocol, the goal of these group interviews was to elicit innovation success stories from participants, an outcome that I could certainly achieve with the teacher participants alone.

*Researcher self-interviews.* I used my commutes to and from the school to query myself about the study, what I was observing and what sense I was making of it. I audio-taped these self-interviews to capture the data. These tapes were subsequently transcribed. Generally, my self-interviews followed the same sequence. First, I would debrief the events of the day, or the previous day, and attempt to identify what I felt to be the most important elements as they related to the purpose of the study. Second, I would try to connect the most recent events with prior experiences. Third, I would reflect on the research process, how I was feeling about the study and why. Often these reflections resulted in minor adjustments to my practice as a researcher. Fourth, I would prepare for the next scheduled field activity.

*Data Analysis*

Qualitative data analysis involves the systematic and iterative process of working with data with the goals of interpreting, synthesizing, and reporting it in such a way that the reader finds meaning (Merriam, 1998). In this study, data collection and analysis occurred in an iterative fashion over the 10 weeks that I visited the school. Data analysis intensified after field work was completed and continued throughout the report-writing process.
I attempted to support my analysis process for this study using the NUD*IST (N5) data analysis software. Although I found N5 useful as a tool to catalogue transcribed data documents and later, to search across these documents, I did not find it useful in coding the data beyond some initial open coding. I discovered that I needed to see multiple data pieces spread out before me in order to code and categorize. With a limited desktop, N5 did not meet this need as well as my dining room table did. However, I did experience the value of using N5 for storing, managing, and searching for data. So, I plan on continuing to use this tool on a limited basis in the future.

I analyzed the data from this study through the well-established constant comparative method. The constant comparative method is an analysis method that begins early on in a study and is useful in working with multiple data sources (Bogdan & Biklen, 1998; Merriam, 1998). This method involves an iterative process of collecting data, identifying major and recurring themes in the data, developing categories for these themes, working with and coding the data to reveal representations of the identified categories, and synthesizing categorized data within a larger context which identifies essential relationships and processes (Bogdan & Biklen, 1998).

What did it mean for me to use the constant comparative method in this study? It is difficult to describe such an iterative and emergent process in linear text. So, I will provide bulleted points describing the key activities that I engaged in to analyze the data. Keep in mind, I engaged in these activities over and over again, with many different pieces of data, at varying stages of analysis:

- For any new piece of data, I reviewed it as a whole soon after I collected it.

This process was somewhat like surveying the data piece from a bit of a
removed stance - just taking it in to see what impressions it made upon me. For example, for each individual interview, I listened to the tape of the interview during the commute home. Then, I would often record anything that struck me as relevant to my research questions as part of my self-interview process. Once transcribed, I initially approached the interview on paper similarly, simply reading it through as a whole, again for general impressions.

- After these first passes, I would get closer to the data piece and examine it in detail, reading it through again but, this time, more slowly. As I read, I would code the data by making notations in the margins with colored pens. "Active learner," "constructivist," "shared responsibility," "democratic practice" - these are just a small sampling of some early codes. This level of coding, open coding, produced many, many codes with few or loose connections. I was happy to be seeing something in the data but, had no idea yet what it was. My list of codes just grew and grew.

- Eventually, I started to see certain codes "appear" more often in the data. I began to see similarities and repetitions. I found myself moving back and forth between data pieces much more frequently now - engaging with multiple transcripts at a time, for example - to compare, collapse, and refine codes.

- Soon after, I moved into axial coding through typologizing, creating rudimentary pictures that connected the themes I perceived in the data. I would draw these typologies everywhere - on pieces of scratch paper, all over my mirrors at home with dry erase markers. Eventually, each would be transferred to my researcher log so that I could revisit and revise (or abandon)
it. This is when the data seemed to begin working *me* rather than me working the data. Analysis pervaded my waking thoughts and dreams. Early typologies took the form of concept maps. I recall one on my bathroom mirror with "democratic practice" at the center and such things as "shared decision-making" and "group visioning" sprouting off to the sides.

- Ultimately, I began to feel as if I was seeing nothing new in going over the data. About this same time, I noticed that I had shifted to drawing pictures instead of simple diagrams, to thinking in metaphors and making more elaborate connections among the themes. I found myself "playing" with my constructions, asking such questions as: Is that it? What would happen if I took that theme away? What is missing? It seemed as if I was "testing" the work. Finally, I wrote and, as I wrote, I regularly reached back to the data to pull out now familiar stories and examples to support my text.

As noted previously, the triangulation of multiple data sources enables a researcher to balance the strengths and limitations of one data source with those of another (Denzin, 1978) and to collect layers of data that will assist in discovering themes during the analysis process (Lawrence-Lightfoot & Davis, 1997). In this study, I triangulated data from individual and focus group interview transcripts, observation field notes, researcher log entries, and artifacts to identify and validate themes in the data through an iterative process. Initially, I identified five themes, or dimensions, that I perceived as significant to Brownlee creating and renewing itself as a school community of innovators in teaching and learning practices. However, I ultimately concluded that two of the themes could not be substantiated through triangulation with a high degree of
confidence. Thus, I collapsed these two themes into the other three; the three themes that did emerge strongly through the triangulation of data sources.

As I describe in detail in Chapter 5, one of the three dimensions that I identified as substantial was the theme of inquiry; that is, Brownlee's pervasive commitment to collecting and using student progress data to determine individual learning needs and make decisions about teaching and learning strategies. In order to explicate my data analysis process for the reader, I now offer a description of how I arrived at the theme of inquiry, particularly through the application of triangulation.

First, as I reviewed individual interview transcripts, I noticed that most study participants spoke about the importance of using data to know their students. They described how they collect and use individual student data annually, monthly, weekly, and even daily to identify individual learning needs and individual teaching and learning interventions to meet those needs. The individual interviews provided my first clue that the collection and use of student data was an valued practice at Brownlee, at least in word. Later, focus group transcripts provided additional evidence that study participants valued data collection and use. The study transcripts also exposed me to participants' use of common terminology as they spoke of data collection and application. They used terms such as "research," "action research," "data discussion," "class profile," "running record," and "inquiry."

It was certainly significant that participants spoke of the use of data, and spoke of it in consistent ways, to inquire into student learning needs and progress. However, it was not enough on its own to establish inquiry as a theme. I needed to witness
participants actually using data in their daily work practices in the ways that they had described. Thus, I turned to another data source.

My observation field notes provided substantial evidence to corroborate what the transcripts were showing in the form of numerous examples of school staff members using data in the ways they had described. I witnessed participants using established data collection procedures and tools to collect student performance data with individual students and with small groups of two to three students. I watched participants construct customized assessments to collect student data in reading, writing, and math. I observed staff members as they compiled collected data, discussed its meaning, and made decisions regarding teaching and learning practices arising out of their discussions. Observation field notes not only provided supporting evidence for what participants had already brought up during interviews but also introduced new practices that I could then follow-up on in later discussions. Thus, my analysis of interview transcripts and observation field notes operated in a cyclical fashion with each data source corroborating the other as well as introducing new data into the cycle that then could be investigated by the other.

Perhaps most vital to the development of the theme of inquiry was the use of yet another data source, artifacts, to corroborate and even expand this theme. Many artifacts provided written evidence of Brownlee's commitment to inquiry in understanding and advancing individual student learning. School brochures and information packets described the school's use of data for student learning. Data collection instruments (both blank and completed) provided a number of different examples of how school staff collect data. Brownlee's annual data books demonstrated how the school analyzes, stores,
and provides access to data for use by staff members. The data books also offered a large quantity of written evidence for the variety of data that Brownlee staff collect not just on student performance, attitudes, and behaviors but also on staff member and parent attitudes and behaviors as well. Brownlee's data books extend back since the school's opening, establishing longitudinal evidence for the theme of inquiry. In effect, although my field days with Brownlee were limited to 20 days in 2002, my analysis of artifacts such as the data books contributed historical evidence that ultimately strengthened the development of the inquiry theme. Thus, it was the examination and comparison of a number of different data sources that provided enough substantive evidence which led to my confident determination of this theme as well as two others.

Interestingly, after I had identified five themes and later settled on three, I returned to the literature to discover that Wenger (1998) had developed a model that required three modes to support a design for learning. As I read about the three modes, I noted the similarities with the three themes that I had identified through my research with Brownlee. I also noted some points of departure. However, the discovery and use of Wenger's model during my continuing data analysis and subsequent report writing, provided to me another form of triangulation discussed in the literature, the triangulation of theory (Denzin, 1978). In essence, I was able to hold my research findings up to the light of a priori theory, substantiating my findings and contributing research-based insights in the process.

Issues of Research Quality

It is critical for any researcher to address issues of quality in the design and execution of a research study. I addressed the quality of my study by using strategies for
increasing the validity and reliability of the work as well as for encouraging appropriate generalizations from the work.

**Validity**

Validity is one construct by which individuals assess the quality of a research study. Merriam (1998) characterizes validity as the degree to which research findings match what is truly going on. Further, she suggests a number of strategies for enhancing the validity of a study including triangulation, member checks, peer examination, and the clarification of researcher biases.

As described previously, I triangulated by using multiple sources of data and multiple methods of data collection. I used member checking as a second strategy to enhance validity (Maxwell, 1996; Merriam, 1998) by asking participants to comment on the accuracy and plausibility of the data collected and any preliminary interpretations to date. I used member checks in a number of ways depending on where I was in the evolution of the study.

For example, early on, working from notes in my log, I would suggest interpretations to participants to obtain their impromptu reactions. I did this informally and repeatedly both during individual observation days and focus group meetings. Later, each time I produced a draft of my findings, I would email it to participants for feedback. Participants were free to provide feedback in an open-ended, unstructured way and/or through a checklist (see Appendix B) adapted from one suggested by Stake (1995). Admittedly, not many participants have provided me with feedback on these written pieces. However, the four participants that have responded to date, reacted positively overall and had only a few minor, factual corrections or additions to contribute. I have
left the door open for participants to continue to comment on the work. After all, their input will only improve it in the long run.

To further address validity, two members of my peer writing group read and critiqued the draft write-ups of my findings. Both of these readers are doctoral students who have taught in the K-12 school system. Their critique has been incorporated into the text. In particular, my peers helped me in my self-critique by discussing with me my biases, how they might impact the work, and what I could do to manage their influence. Both peer reviewers felt that my strategy for including personal reflections periodically throughout the work was an effective one for providing additional data for the reader to form his/her own judgments.

Reliability

From a qualitative perspective, Merriam (1998) describes reliability as "whether the results are consistent with the data collected" (Merriam, 1998, p. 206). Merriam offers three techniques for increasing the reliability of a qualitative study: using triangulation, articulating the investigator's position, and maintaining an audit trail. I have already described how I used triangulation and examined my position as researcher in my work. Subsequent chapters of this document will demonstrate further how I included my position in the written text.

To enhance the dependability of my study, I also kept an audit trail of my decisions and activities throughout the research process. I tracked decisions in my researcher log and through my self-interviews. I maintained a running "To Do" list in my log as well. I noted all field activities on my calendar. I organized participant interview transcripts, artifacts, and self-interview transcripts in a tickler file. I tracked audio tapes
through an index. All of these data and process management activities helped to provide a "chain of evidence" that another individual could use to follow my steps from research questions to conclusions and back again (Yin, 1994).

**Generalizability**

Generalizability is yet another way to assess the quality of a research project. Furthermore, theory is “the level at which the generalization of the case study results will occur” (Yin, 1994, p. 30). Well-developed theory serves as a framework in which to analyze the findings of a single case. In Chapters 5 and 6, I present the findings and conclusions of this study in light of the theoretical constructs discussed in Chapter 2. I make connections in the text from the outcomes of this research back to theory but not to other specific school cases. Finally, it is these connections back to theory that I (or other researchers) may find useful in exploring additional cases through further research.

Helping readers to make naturalistic generalizations from a study is yet another way to address the quality of research. “Naturalistic generalizations are conclusions arrived at through personal engagement in life’s affairs or by vicarious experience so well constructed that the person feels as if it happened to themselves” (Stake, 1995, p. 85). Per recommendations made by Stake (1995), I have attempted to support the reader’s ability to form naturalistic generalizations from this research by: detailing my research methods in plain language; furnishing substantial raw data to the reader; inserting pertinent information about myself, including biases; and incorporating reactions to the data discussions from research participants, two peer readers, and several committee members (Stake, 1995).
Study Limitations

One limitation of this study was the single case design. By choosing to study a single case, I invested the goals of this research in the individuals and activities that make up one school. As such, I risked, from the outset, that the case would turn out to be something wholly other than the phenomenon of interest (Yin, 1994). Aware of this risk, I attempted to select the research site in a very thoughtful manner, consulting not just my own experiences with League schools but also the perspectives of other individuals, including League Directors, committee members, and administrators at the potential school sites.

As a single case, the diversity of individuals, experiences, and circumstances that I experienced were, undoubtedly, limited. For example, if the school had been located in a large urban area rather than a suburban one, I am sure that my experience would have been quite different. That said, by focusing my efforts on one school rather than portioning my limited resources over a number of schools, I was able to pursue the study's aims in greater depth, affording readers more than a cursory glance at Brownlee. Further, I have a stronger and more refined basis from which to pursue additional case studies.

Another limitation of this study was my decision to study an innovative school. By doing so, I restricted the research experience to a positive example of learning innovation. Yet, much is often learned from non-examples, or at least, a diversity of examples; thus again, my intent to conduct future studies.

A third limitation may have been the fact that I have never been a school teacher or school administrator. Anthropologists and others regularly study cultures of which
they are not members. Similarly, my interpretation of what I heard and saw at Brownlee was that of an outsider. I am an educator who chose to study a level of education that is not directly part of my experience other than that as a student years ago and as an instructional technologist who has visited and worked with schools through my affiliation with the League of Professional Schools and other professional work. While this lack of related experience may be considered a significant limitation by some, an outsider perspective can also be advantageous in approaching the object of study from an alternative point of view (Fay, 1996). I do think that my outsider status enabled me to “see” Brownlee in ways that insiders could not always readily access. In fact, several participants expressed to me their difficulty in "seeing" a school community of which they are so much a part. I imagine that is why most of the participants expressed eagerness to learn about what I had discovered in conducting the study.

As an outsider, the only challenge that I did experience was in having to learn language native to K-12 schools, the county educational system, and even Brownlee in particular. For example, I had to master acronyms on-the-fly as I proceeded with data collection. I approached this challenge directly by simply asking participants to define certain terminology as it was used. Then, I maintained a list of definitions in my researcher log that I referred to when needed.

*Ethical Considerations*

To ensure the protection of participants, the proposed study and any required forms were submitted for review and approval by the university's Institutional Review Board (IRB). Data collection did not proceed until the IRB (and the school's county) had granted its approval. To further protect participants, I led them through an informed
consent process during which I conveyed to them, both orally and in writing, the research purpose, the researcher's role, responsibilities and contact information, the collection, use and storage of data, issues of confidentiality, and their rights as research participants. Once individuals indicated to me that they were satisfactorily informed, they were required to give their consent in writing in order to take part in the study. Participants were aware that they could withdraw this consent at any time without penalty.

A number of measures were taken to ensure that the participants in this study were treated with the utmost respect and protected from harm. Individual and organizational identities have been concealed in my research report through the use of pseudonyms selected by participants. All data collected during the course of the study were maintained by the researcher in a secured location. Interviews and, if warranted, artifact reviews were conducted in private locations. Participants were consulted in advance regarding the scheduling of data collection periods. Finally, participants were given the opportunity to review and comment on preliminary research findings to ensure accurate representation. All requested revisions to date have been accommodated.

Considerations for Other Researchers

In reflecting on my experience in planning for and executing this study, I arrived at certain considerations that may prove helpful to other researchers in pursuing their dissertation work. My first recommendation is to build in as much time in the research endeavor as possible to allow for unexpected delays. For example, I was forewarned by a number of professors that many county educational administrations require a researcher submit a research proposal for approval prior to beginning any data collection and that this approval process could take as much as one month's time. Sure enough, I applied to a
county that estimated in writing that their approval process could take up to 45 days. As it turned out, the county required over 60 days to approve my study, a very low-risk study at that. This unexpected delay significantly compressed my planned data collection and analysis period, adding a good deal of stress to the research venture. Thus, in constructing the initial timeline for a study, I recommend estimating required completion times for your research activities and then doubling these estimates to build in ample room to accommodate those unexpected and uncontrollable events that will undoubtedly occur. To be certain, I have yet to hear a researcher complain that he/she had too much time to execute a task.

A second recommendation for the researcher is to become very familiar with your research site's calendar prior to beginning your study and build in such occurrences as vacations, testing schedules, conferences, and other special events into your research activities calendar allowing for buffer room on either end of these occurrences. Further, discuss research activities and the research calendar with key contacts at your site, seeking their input and agreement in the process. In my study, I understood prior to entering into data collection that the timeframe for my field visits would be less than ideal, including a weeklong Spring Break and a significant amount of end-of-year testing for the school. I discussed and planned for these events in advance with the administrators at the school. Further, I ensured that they felt confident that the study's field activities could be completed without any undo burden on the school community. I recognize now that the preparation and wrap-up for scheduled events often spill over into additional unscheduled days. For example, student testing may be scheduled on the school's calendar for Monday through Wednesday but, in actuality, requires preparation
time on the previous Friday and wrap-up activities on the following Thursday that may impact the availability of study participants. Thus, I recommend scheduling pre- and post-event buffer days into the research calendar so as not to fall behind schedule or arrive for a field visit that must be rescheduled. The buffer days can be used by the researcher for activities other than field visits such as data management, transcription, and analysis.

Finally, I recommend entering the field with the expectation to "expect the unexpected" and the flexibility to make unanticipated adjustments "on-the-fly."

Regardless of how much a researcher plans in cooperation with his/her participants, numerous unexpected events will undoubtedly occur. Over the course of my 10-week field experience, I worked with study participants who were personally impacted by illness, injury, the sale of homes, death, and other significant and stressful life events. Ultimately, these participants were voluntarily welcoming me into their professional lives. It was incumbent on me as a visiting researcher to be sensitive to their needs and circumstances as they arose and work to problem-solve with them alternative arrangements for study activities when necessary.

Summary

In this chapter, I described the methodological design for this study. The design was an ethnographic, single case study. The research site was Brownlee Elementary School. Participants included nine individuals, six teachers and three administrators. I collected data using individual interviews, focus groups, artifacts, observations, and researcher self-interviews. I analyzed data using the constant comparative method, coding for themes across the data. The quality of this research was addressed through a variety of
strategies including triangulation, member checks, peer reviews, and the articulation and examination of researcher biases.
Chapter Four

A Portrait of Brownlee

And so begins our work, our hardest work - to bring the ethnographic moment back, to resurrect it, to communicate the distance, which too quickly starts to feel like an abyss, between what we saw and heard and our inability, finally, to do justice to it in our representations (Behar, 1996, p. 8).

The purpose of this study was to explore the dimensions that foster and sustain teachers as innovators and schools as innovative places for improved teaching and learning by studying an exemplary League school known for its innovative practices in teaching and learning. In Chapter 5, I describe my findings, the major dimensions that enable such a school to be and the challenges that may impede progress toward their goals. First however, one must develop an understanding of this school and how the members of this organization "do school." To the first research sub-question then: "Who is this school community of innovators in teaching and learning practices and how do they "do school?"

In this chapter, I begin by describing how I first came to know Brownlee Elementary, an experience during which the seeds were first planted for what would become my dissertation study. Next, I describe Brownlee by using a framework of five guiding questions. This framework was developed by Brownlee's principal, Emma Adams, and used by the entire Brownlee staff to design their school prior to its opening. Through the framework, I describe the school's facilities and staff, students and test
scores, and so forth. These things are certainly a part of what constitutes any school.

Moreover, I paint a portrait in words of Brownlee as a place of community, of children
and adults in pursuit of learning; for this is what makes the school a place of difference, a
school designed for learning, and a place worth getting to know.

**Introductions**

I first visited Brownlee Elementary in the Fall of 2000 with Lew Allen, Co-
Director of the League of Professional Schools. Lew had asked me, as a part-time
graduate assistant at the League, to participate in a new venture, the construction of a
small, web-based representation of a League school. The goal of the project was two-
fold: to capture the best practices of a League school to share with other member schools
and to experiment with a new form of representation of League school work that might
be used by the League and other member schools to capture more League stories. To
complete the project, Lew and I spent a number of days through March of 2001 speaking
with and observing members of the school in action. On-site at the school, I engaged in
very limited direct conversation with staff and students. Rather, my function was a
supportive one to Lew. Specifically, I assumed three roles in this project. First, I observed
and recorded notes as Lew led individual and focus group interviews with the staff.
Second, I observed classroom and school practices as I collected photographs and images
for the site. Third, I designed and developed the web site. Even in a secondary role, it was
this experience with the school that first provoked my interest in working with Brownlee
for my dissertation study.

It is difficult to describe all of what I saw during these first visits that captivated
me; but, perhaps I can provide some snapshots. During my visits to the school, I
witnessed children, from pre-kindergarten special education through grade five, very actively engaged, sometimes individually and mostly in small groups. I watched children read (to each other and the teacher) and be read to (by each other and the teacher) regularly. I watched them share and discuss entries from their writing journals. I saw them paint, sing, dance, operate personal computers, draw, calculate, and manipulate physical objects of all kinds. I watched them move - within their classroom, between classrooms, between grade levels, in and out of small, diverse learning groups. I saw them learn with their homeroom teacher, other teachers, the principal and assistant principal, parents, paraprofessionals and mostly with each other.

Never did I see children sitting in isolation at their desks, alphabetized by rows, silently completing seat work. Rather, I saw children move purposefully through their day with great autonomy and ease. Sometimes, I watched children move as a grade. More often, I saw them move as individuals or with a buddy or two. If a child needed to go to the computer lab during language arts to use the printer, the child went.

The children at Brownlee seemed to know what they were doing and why they were doing it. When I asked, they told me what they were learning and why they were learning it. They showed me their work and also the tools they use to stay on track. They also volunteered to me how far along they were in their progress and what they needed to do in order to advance to the next stage. They spoke of and used strategies to support their reading, writing, and math. They were not shy in pulling me into their learning. As far as they knew, I was just another resource. They were social and on task.

Beyond the kids, I saw teachers who seemed to like being at the school. I heard staff members say, over and over, "this place is different - it is like no other school we've
known.” The teachers talked about being collaborative, about interacting with staff members and students across the school all the time. They described being called on regularly to develop and share their expertise - through book studies, multi-disciplinary work groups, team teaching, professional conferences, and the like. They talked about knowing their children really well (where each child is currently and where each needs to go next with his/her learning) and using data to plan instruction on a weekly, daily, even moment-to-moment basis. The teachers spoke of having a voice in what was valued at the school and how shared goals would be pursued.

As I walked the halls of Brownlee, I saw doors open, heard ample conversation, caught the principal and assistant principal visiting classrooms, and observed a great deal of project-based, multi-disciplinary work in action and on display. In the classrooms, I saw whole-group instruction used sparingly. In fact, only once did I see a teacher leading a lecture to an entire class of seated students. Instead, I saw teachers working closely with students, one-on-one or in small groups. Sometimes, I saw more than one teacher working with small groups in the same room. Most of the time, I saw teachers engaged in inquiry about learning - asking questions of students, observing them as they worked, discussing student work with other teachers, and collecting, recording, and using data to determine and advance student progress.

There was so much energy in this school. Lew had told me Brownlee was different; an exemplary League school that had advanced far beyond basic League tenets and practices and many other League schools. Brownlee staff members had told me it was different. I recall visiting one first grade teacher's classroom, where I watched children actively engaged, both individually and in small gatherings, in learning. I asked
the teacher, a veteran of the public school system, if she was a similar teacher at her other schools? Did the activity in her classroom look the same? Hope explained that, fundamentally, she was the same teacher. Her beliefs and practices had remained quite consistent. However, what was different at this school is that she had the power, support, and professional community to take teaching and learning as far as she could imagine.

The school did feel different - certainly from my school experience and from that described by others, whether anecdotally or in the research literature. Staff members were not isolated, students were not passive, and instruction was not didactic. But, how did they do it? What was going on here? Based on what Hope had shared, it seemed complex. It seemed to have to do with individuals, but also, the school. As a researcher, I was intrigued.

There was more. Growing up, I had developed a terrific love for learning from my parents. I had done very well in public and private school yet, had resented most of my formal schooling experience for its restrictive and punitive nature. In high school, I wrote a research paper on experimental education. Why did visiting Brownlee prompt me to dig up this paper after so much time? I was reminded. At 16, I had chosen to explore alternative approaches to schooling. In many ways, I realize that I have been seeking other models ever since. Brownlee, I suspected, might be one such model. It might be a place where I (and perhaps my friends) would have enjoyed being a student, developing positive beliefs about school rather than negative ones. I wanted to find out. I wanted to understand this school.
An Adventure Begins

Researcher Log, December 19, 2001: Well, I'm just back from Brownlee. I discussed doing my dissertation research with them. Emma was all for it - Diane and Jack too. I think Brownlee will be a great site for my study….They are so open about their practices. And, I suspect they may already see a benefit for them, maybe leveraging some of this experience in the book-writing effort they are undertaking….I felt excited as I left the school!

They liked the idea of asking the staff to identify the study participants through a consensus-building survey and suggested I administer it in person rather than through the Web. It's all set for January 8. I'm on the agenda for their Talk Team meeting. I like their "just do it" way of working - low bureaucracy.

Brownlee is a good choice. Already, it's showing signs of a great collaboration.

The First Guiding Question: Who Are We?

As mentioned previously, the staff at Brownlee used a framework of five guiding questions to design their school prior to its opening. The first guiding question reads as follows:

**Who are we?** We need to know each other and trust one another in order to work collaboratively together. This means we need to make a point of talking and sharing with people who are not on our grade level or on our hallway (excerpt from Brownlee Guiding Questions document).

This question, along with the other four, was developed by Brownlee principal, Emma Adams. The questions are used in this text to introduce certain defining aspects of the school.
Researcher Log, March 21, 2002: I am on my way to the school. It is my first official day of data collection - finally!…Because of my compressed data collection and commute time, I have decided to record some of my journal entries instead of hand writing it all. I am approaching the school. Let me see if I can describe it. Brownlee sits at the bottom of a hill. It is a two-toned brick building, taupe and rust, with a portico along the front where the buses load and unload….The gym stands as a separate barn-like building, sided in a grayish white. It connects to the school via a covered walkway. Next to the gym is the fenced playground - a couple picnic tables, some trees, swings, monkey bars, some jungle gyms, basketball courts, and a large, open field. Standing in the parking lot outside the school, the only thing you see around the perimeter of the school grounds is woods.

Brownlee Elementary is a public school located in the southeastern part of the United States. The school was built five years ago to alleviate overcrowding in the existing elementary schools in the county. Originally, students and staff were to be relocated to Brownlee from three schools in the area. However, one school successfully fought relocation with the Board of Education. So, most of the original school population came from two feeder schools. Many did not choose Brownlee but were told they must go. Hope Sprinzeturnel was one of them:

It is the best thing that ever happened to me but, I cried. I did not want to go. It was like a death to me. I was affiliated with my school for 13 years….It's what I knew and I was comfortable there. On top of that, Emma Adams came to the school and talked one-on-one to the people that were coming. From that she came
back to me another day and said, "How would you like to teach first grade?" I said I hadn't taught first grade in 19 years....It is hard to tell your new principal "No" and, early on in my career, first grade - that's where my heart was. So I thought, "Okay." But before I told her okay I said, "I cannot teach whole groups. I do not teach whole group." That was fine.

When first constructed, Brownlee sat in an undeveloped part of the county. Today, the area includes rural farmland, working class, middle class, and upper middle class neighborhoods (Brownlee Pay for Performance Application, 2001-02 School Year). Although situated in a high growth area, the school is still rather geographically isolated. As they are not embedded in as established community, staff speak of the school as being the town. Originating as a new school in an isolated area seems to have worked in Brownlee's favor. The school community is close-knit. As teacher Barbara Brady put it at the March 29 staff development day, "We are Brownlee town." Assistant principal, Jack Hoover, provides some background:

When the school started there was lots of excitement, just about being together, just about being new. We had to put shelves together. We had to unpack. Everything was in boxes. So we all went through a common struggle, and that is one of the keys. Sure we had the retreat and that was really important. But also that summer, when we were setting up and unpacking, that was a lot of work and we all had to do it. It is not like anybody didn't have to do it. Your room was in boxes. The filing cabinets had to be put together. Everything had to be put together and you had to come in and do it before the first day of school. So that right there was one common thing that brought everybody together, because you
would find out who was good at what. I helped several people put shelves together, and somebody else was good at [something else]. You know, we would turn around and do this for people. So that helped people start developing the "pitch in" attitude. "Okay, what can I do for you?" And that has never left this school.

Brownlee houses 23 regular education classrooms with an average class size of 18 students. Further, the school has 11 special needs classes that include autistic and intellectually disabled students as well as children with emotional/behavior disorders. In addition to ample spaces for art, music, physical education, and pullout services such as speech therapy, Brownlee has two computer labs each housing 30 networked personal computers, a projection system, printer, and scanner. The school is also home to an impressive media center with an eclectic assembly of teaching and learning resources for students and staff including internet-accessible personal computers, books, audio tapes, video tapes, wall displays, manipulatives, models, and a small production studio.

During my time at Brownlee, I noticed a great deal of consistency among the regular classrooms. All rooms have wall-to-wall carpeting, a wall-mounted VCR and monitor, two personal computers, a printer, a sink with a water fountain, and a two-way intercom. Many have the half-circle table for small group instruction and assessment and the dimmed lighting and quiet classical music that teachers tell me originate out of the brain-based learning research. A visit to the classroom of second grade teacher, Ann Stewart, offers a sense of Brownlee's classroom spaces:

**Researcher Log, March 27, 2002:** There's quiet music playing in the background. It's piano - almost like a George Winston, really light, quiet, gently meditative
music.…The lighting in the classroom is warm, subdued. Ann has covered the fluorescent lights overhead with pieces of colored paper - blues and purples. So, light is still filtering through overhead but very dimly. Most of the light comes from lamps that Ann has placed throughout the room, the kind you'd find in a den or family room. The space feels more like a home made up of small, gathering places instead of one, large classroom.

The desks are arranged asymmetrically in small groups of 4 and 5, all facing each other in little groups. In a back corner, Ann has a half-circle table where she works with a few students at a time. Across the way, she has a wooden rocker that she sits in as she reads to the children every day while they sit on the carpet. [They call this area the living room.] There's a modified bunk bed in the opposite corner - a ladder leads to the top bed with throw pillows and then, underneath, there's a desk and a chair with a computer, bookshelf, and a small, cushy chair….There's another computer with a printer at the front of the room along with more bookcases with books for reading, dictionaries, encyclopedias, games, and supplies.

Most Brownlee classrooms have wall displays reflecting common school-wide goals and practices including learning strategies, assessment rubrics, personal and group learning goals, self-management tools, and the like. Ann's classroom is no exception:

Researcher Log, March 27, 2002: Ann has lots of stuff on the walls, most of which I've seen in other rooms too. When you enter, first thing on the left, there's "Our Class Beliefs" that everyone in the class developed and signed at the beginning of the year….Then there's a display on writing strategies, "Sloppy
Copy, Check the Checklist, Buddy Conference, and then Publish," four strategies, each with steps below it....Toward the back of the room, Ann has a writing wheel divided up into these same four strategies. The kids have clothespins with their names on them that they clip on the wheel to indicate what strategy they are currently working on....There's also a reading wheel with sections, "Use the Library, Listen to a Story on Tape, Respond to a Story, Read with a Buddy, Read by Yourself" and again, student clothespins all around it. There are a couple wall hangings that the class generated together. One that begins "We think good writing stays on the same subject, makes sense, has a good start, has details, has a beginning, middle, and end,..." Another one starts out "What to write: song, story, poem, something that is true,..."

Let's see, what else? Oh, it's the Reading Express Hand outlining five strategies for reading. I see that one in everybody's classroom. Here's another popular one, posters of the writing stages that map to the rubric they all use, "Writing Stage One - the Emerging Writer, Stage Two - the Developing Writer...", [six stages in all]....Back to the front of the room now, on the whiteboard at the entrance - "Let's Have a Great Day" and then, the schedule today: "1 - Writing Workshop, 2 - Reading Workshop, 10:45 - Writing Celebration," we did that already, "11:07 to 12:15 - Lunch and Outside, 12:15 to 1:20 - Math, 1:20 to 2:05 - Specials, 2:05 to 2:35 - Grammar."

One day, as we were weaving in and out of classrooms, I asked assistant principal, Jack Hoover, about the similarities in practices between Brownlee classrooms. Jack shared that, in his experience, this was not a common characteristic of other schools.
He attributes the commonalities to the high degree of collaboration and communication across teachers at the school. The collaboration promotes the sharing of best practices among the staff. At the same time, it builds a community of professionals who trust and respect one another's expertise. The teachers bring this up during a focus group:

Marie: I think the thing that underlines all of it absolutely time and again is the unspoken respect and trust for people that exist in this building. One time, when I was asked to go help Jane in her room, it took five minutes in there and it was like, "Jane, you are my teacher of the year, you are it!" I just came out of there saying "You've got to go see Jane. You won't believe it." That's all it took. It increases that respect for what Special Ed does and it opened me to seeing what else they do, not just Jane but everybody else in that group. And going down to first grade for book buddies and seeing how they manage whatever is going on….Whatever the case may be, there is a mutual respect for the fact that everyone in this building is more than able to do their job and they'll do what it takes to make sure it happens at a quality level.

Jen: Trust, respect, those things don't just happen. They're usually built or earned.

Hope: I think Marie hit on one of them - on why it happens. Because [of] the collaborative teaching that we've done, the coaching, the going to other people's rooms to observe and all that. I've never been in another place where I was allowed out of my room. I'm not kidding!

Claire: She's not kidding, to wander around and look at what other people are doing.
Hope: Yes, you stay in your room!

Jane: I've been in numerous other schools and nobody much ever came in the room, ever - administrators, other teachers, whoever. As long as I did my thing and kept the students under control as much as possible and didn't cause any problems, I did my thing and everybody else did theirs….As long as I kept it down.

Hope: Kept it in your corner!

Jane: I've been in a school where I was asked to literally keep them - don't bring [the students] up in the front office or anything - keep them over there….I doubt anybody in any other school I've ever been in would have even come to help in the first place; much less thought anything about it once they left.

Marie: Now, after that [visit], my kids have gone into Jane's room [as peer helpers] because I want my children to have the same appreciation….So, I make sure my kids are always helping and that's true for the whole school. Everybody's classes support everybody. That's just the way it works.

Hope: Right. It's a "walk a mile in my shoes." You get to know somebody else then you understand their plight - what Jane does, what upper grades do, upper grades coming to first grade [as book buddies]. You understand it….As Emma says "admire and acquire." That's what we do.

One-on-one, principal, Emma Adams, reflects on the school's faculty. Emma has this to share:
Our faculty is one that really has committed itself to doing what is best for the kids. And, I think in some ways they changed the way they teach because they see how kids learn differently. I think they are very trusting of each other, realizing that there is a lot of expertise among them and, because of that, they are real open in saying they don't know. That is not to say there aren't some internal squabbles or personality differences, people preferring to work with one person over another. We are not void of any of that human nature behavior. But, we can keep it on a professional level 95% of the time.

I think there is now a level of expectation, that if you really want to do something, or if you really don't want to do something, you need to be able to explain it. That is not to say that it wouldn't be listened to and respected, but there is just the expectation that, if you have an opinion, you need to share it and you need to back it up. I think that is what has compelled us to look at new things and to continue to question.

The staff at Brownlee is comprised of 36 full-time and 3 part-time teachers, 5 full-time support personnel, and three administrators - the principal, Emma Adams and assistant principals Diane Shephard and Jack Hoover. A master’s or higher degree is held by 59% of the staff. The teaching staff averages 9.95 years of experience, averaging 3.03 of those years at Brownlee (Brownlee Pay for Performance Application, 2001-02 School Year; Brownlee County Accountability Report, 2001-02).

During my time at Brownlee, I interviewed and observed six teachers in depth and had numerous impromptu conversations with many others. As you might surmise, the six teachers with whom I worked closely are all quite distinctive. However, I did notice a
number of shared characteristics. Based on the data, I would describe these teachers as inquisitive, ambitious, broad-minded, adventurous, and persistent. These teachers are never satisfied. They are always striving to do more, to learn more, to experiment with new ideas and approaches. Further, they seek out challenge and new experiences. They don't mind putting themselves out there and trying something new or ambitious. In fact, they seem to relish it as a part of life. In her individual interview, Jane Calamity presents it this way:

I look at teaching this way. You're not ever going to be really there. Every year, you're going to be doing something a little bit different, doing something a little bit better….So, I really don't think, whatever number of years I'll teach, I would ever be really there - where I'll just say "Okay, I've got everything down. I know everything I need to know so I'm just going to coast this year and not do anything." Like last year, I worked on National Board Certification and I was very fortunate, very happy that I passed. It was very strenuous and very time-consuming. But, why not go for it?…Even with this class, with doing preschool autistic for eight years, I've changed a good bit from when I started. You find out new methodologies. You want to try a little of this. You're always just changing or doing something….Autism is such an ever-changing, wide open field, you do have to read a lot of journals, go to workshops, conferences to keep up with all of the changes. Discrete trial, TEACH, floor play, whatever - all the different approaches have their benefits. I think you can always figure out something to do a little bit better.
Even on vacation, Jane is always searching for new ways to help her students succeed. While at the beach recently, she discovered these large, colorful, plastic microphones. She bought a bunch to encourage her students with their verbal skills, a major goal with autistic children. I observed the kids use them enthusiastically during circle time to sing. As Jane sums up her drive to do more: "It comes back to the impact on student learning. The ultimate goal is you want to have an impact on student learning."

Jane is quite different from her colleague Claire Todd; yet, they definitely have some traits in common. Just this past year, Claire took on the challenge of moving from four years as a kindergarten teacher to teach fifth grade. She believes that teachers should take on something new every five years or so to "stay fresh." Claire shared with me her journey into education:

I became a teacher at 35. I was a musician. I did singing telegrams, waited tables on the side. I worked on the 107th floor of the World Trade Center, played guitar on the streets in New York City. I needed to sew some wild oats….I always wanted to be a teacher, but as I grew up, people said, "Oh, you don't want to be a teacher." I got that! But, after awhile I thought, that is what I should do. I needed to do something where I would be able to create, to be creative. I could work nine to five anywhere. It just wouldn't have been any fun. So teaching just seemed to fit.

I went back [to school] full-time. I waitressed on the weekends, when my kids were little. I went nights. It was difficult….Ten years later, we have another child. I decide, I need to go get my masters….I did the exact same thing last
summer. I said "Okay guys, I am thinking about doing the specialist, what do you say?"

For Claire, life is lived as high adventure, goals are ambitious, and the way you get there is by constructing it as you go along. Her approach to life pervades her teaching and her relationship with her students. When she describes how students learn in her classroom, she brings up the terms constructivism and constructivist regularly. Further, I observed constructivist practices in use. In Claire's classroom, fifth grade students:

- form small groups, assume roles such as manager and designer, and work together to construct and present a photo timeline essay on World War II. The students assess themselves using a rubric that they developed with Claire's help.

- learn and sing a song (written and played by Claire on her guitar) in five languages, each of which they identify as Claire prompts them.

- use metaphor to create three-dimensional representations of the components and functions of a human cell with materials as diverse as a cotton sock.

- use the computer lab to write and publish their stories, complete with hardcover artwork, title pages, and embedded illustrations, for display and use in the school's media center.

There are many more individual stories. But, Ann does a nice job of summing up the staff at Brownlee:

[We are] lifelong learners. And, I think that's one reason why we say "if it's not working, we need to go find out" - because we are constantly learning, as adults,
ways to do things better. And we try and teach that to the children. We tell them, if we have half-day planning, "We've got to go learn more about writing so, we'll be gone, here is your substitute." We don't just tell them "We'll be gone." We explain to them, "We're going to learn something." [The students] look at you kind of funny sometimes. "You're going to learn? [We] thought you knew everything!" (laughter)

In a one-on-one conversation, Emma Adams takes the time to describe the children at Brownlee:

Brownlee Elementary is a school really focused on student learning and student support. I think our students come to us and need a fair amount of academic support. We have some students who are very bright and very capable. We have a lot of average kids, hard working students, and we have some who struggle, learning is different for them. Overall, our student population is just a great bunch of kids. They know what is expected here. I think they know we all are watching them all the time. Overall, we really have good discipline, good student behavior, pretty good work habits.

Brownlee services pre-kindergarten through fifth grade regular and special education students. The student body is moderately diverse, both racially and economically. For the school year 2000-01, Brownlee had 493 students, 63.4% White, 26.4% Black, 5.5% Hispanic, 1.3% Asian, 0.4% American Indian, and 3% multi-racial. The school’s ESOL population was 1.8% and growing. The percentage of students qualifying for free/reduced lunch was 14.1% (Brownlee County Accountability Report, 2001-02).
The school's student community is expected to continue to grow and diversify, both of which are a source of strength and challenge to the staff. As class sizes increase, Brownlee staff will be challenged to devise strategies for maintaining their one-on-one and small group approaches to teaching and learning. The growing influx of ESOL students, while enriching the learning experience, will require new resources and staff expertise.

March 21, 2002, Researcher Log: It has been a long wait, waiting for the county to approve the study. I've been told that this county is heavy on the bureaucracy. And then trying to get into the school right now, they are burdened with a lot of testing - state testing and then, in a couple of weeks, county testing.

Like other American schools, Brownlee has even more standardized testing to complete this year. During the 2001-2002 school year, kindergarten will have three windows during which to complete testing, two weeks in August, seven weeks in January and February, and six weeks in March and April. Third and fifth grades will complete the nationally used cognitive ability tests for three days in October and the norm-referenced achievement test over five days in March. First, second, third, and fifth grades will take the state standardized test over five days in May. Brownlee also sits in a county that requires tests, some of which are used in determining a child's grade placement for the following year. This testing is meant to assess student mastery of specified academic knowledge and skills, the official curriculum for all schools in the county. Third and fifth grades complete a writing assessment in the Winter. Fourth grade completes the county high stakes, criterion-referenced test over four days in April (Brownlee Elementary Testing Schedule, 2001-2002).
The County Accountability Report for Brownlee for 2001-02 documents that, while the school's scores in reading and writing are solid, scores in math are lower. In reading comprehension on the 2000-01 Stanford Achievement Test, Brownlee fifth graders "scored as well as students who have finished the first month of sixth grade would be expected to score", a grade equivalent (GE) of 6.1 as compared to a national norm GE of 5.6. In math, Brownlee fifth graders "scored as well as students who have finished the seventh month of fifth grade would be expected to score," a GE of 5.7 as compared to a national norm GE of 5.6. For another perspective, on the 2001 fourth grade county test, Brownlee students performed in the excellent/effective range as follows: 81.5% scored excellent/effective in Language Arts, 76.1% in math, 80% in Science, and 75.4% in Social Studies. In writing, Brownlee students consistently perform above comparison schools' projected performances. On an average writing scale from 1 to 6, Brownlee students scored approximately 4.7 in 2001, exceeding the county's designated passing score.

Brownlee teachers use class profiles to track individual student progress throughout the school year. On the class profiles, they record standardized test results along with findings from more discriminating, customized assessments. For the 2001-02 school year, assessment data compiled for the school indicated that, by year's end, 87% of all students were reading on or above grade level, 86% were writing on or above grade level, and 74% passed their math posttest.

Brownlee is not satisfied with norm-referenced test scores, in part, because their scores have not met county benchmarks. Historically, Brownlee has done very little test preparation with students. Suspecting it may be one reason for falling short of county
benchmarks and feeling the pressure of the 2002 No Child Left Behind federal legislation which emphasizes test scores as an accountability measure (No Child Left Behind, 2002), the school included increasing norm-referenced scores in their 2001-02 Pay for Performance objectives. They will be analyzing test data to develop and implement test-taking strategies targeted at raising scores (Brownlee Pay for Performance Program, 2001-02). As with other schools, test preparation time, testing time, high-stakes test scores, and the breadth of academic standards continue to challenge Brownlee staff as they struggle to maximize the time devoted to sound instruction and assessment.

When it comes to student learning, dynamic one-on-one and small group interaction within and between classrooms are hallmarks at Brownlee. 

Researcher Log, March 27, 2002: We are going to a writing celebration in the media center. There are two today, one for grades K-2 and one for 3-5. I'll be attending the lower grades' celebration with Ann's class. Two students from each grade level are chosen by their peers as good writers. These students spread themselves out in the media center with their stories. The rest of the students from K-2 arrive and are reminded by Jack Hoover to "listen to about five or six stories and, at the end of each story, remember to smile and clap for the author."…The students roam around the media center, seating themselves in front of the authors of their choosing. Each author waits for the next group and then reads his/her story. It is a round robin of activity. There is clapping along with a good bit of spontaneous compliments from the audience members.

There are many more examples of such dynamic interactions at the school. Upper grade children spend regular time in Special Education classrooms as peer helpers,
assisting teachers with students. Fourth grade kids team up with first graders as book buddies. They meet in the media center to read to each other in pairs from books aligned with the curriculum. A small group of the school's lower performing children gather routinely with principal Emma Adams for some extra instruction in reading. Brownlee's music teacher collaborates with special education teachers to develop students' verbal skills through song.

Perhaps most striking about the students at Brownlee is the ease with which they move through their day and the great degree to which they are well-behaved and on task. They are not shy or reserved as they work. They clearly feel comfortable moving about and interacting with other students and adults as they locate the resources they need to learn. The first time I entered Ann's classroom, a second grader walked right up to me and asked me to listen as she read. In the computer lab with Claire's kids, two children called me over to help insert clip art, another asked me to read and respond to her story. This last student informs me that she is a stage five writer. Arriving for my second visit with Ann, a little boy stopped me in my tracks to help him decode some words he was struggling with while reading. Later during a focus group conversation, teacher Barbara Brady encapsulates my experiences with the children as she offers, "These students view every adult as an aid in their education. Any adult that walks in the room is fair game."

No doubt, the dynamic interactions they witness among the staff and participate in themselves foster such ease and initiative.

*The Second Guiding Question: What Do We Stand For?*

What do we stand for? As a faculty, we must have a clear understanding of what we believe about teaching and learning. Based on our own learning experiences,
we will develop our Principles of Teaching and Learning. We will use this "covenant" as a basis for our future work (excerpt from Brownlee Guiding Questions document).

Brownlee teachers are consistent and unwavering in attributing the school's unique and strong character to principal, Emma Adams. During the first focus group, I had asked participants to talk about some of the elements that enable Brownlee to be what it is. Marie Conlin pointed out that folks from the Spencer Foundation had asked the same question. Then, the conversation shifted immediately to Emma:

Marie: The environment that Emma permits and the expectations that she holds, the trust that she gives, that can't be manufactured and given to another school. And that is so hard to explain to other people….She is definitely a leader from behind.

Hope: I agree with that 100%. What I think the story is really about? Emma Adams.

Barbara: But also, I think the greatest compliment that we could give to Emma is to go to other places and start it over. Those of us who have learned the Brownlee way and have used her as our guidance, I would hope that we've learned enough. I think that's her purpose, I really think she wants us to learn. That's why she allows us so many opportunities to be leaders.

Ann: I think we can go somewhere and try to do that but, I'm not Emma. I'm not as intelligent as she is. I am not as laid back as she is. So to create this environment - I can do the same thing she did, start over at the beginning and do
everything. It's not going to be the same. I see what you're saying but I agree with
Hope. It's Emma.

On first impression, Emma can be intimidating. She is intelligent, educated, and
experienced. She worked as a second and third grade teacher while earning a masters
degree in Early Childhood Education. She completed coursework in Supervision and
became an instructional lead teacher and later, an assistant principal. She earned a
doctorate in Educational Leadership and served as an elementary school principal prior to
spending six years in higher education as a Director of the League of Professional
Schools. She returned to the field as principal of Brownlee. From that first year forward,
Emma and the League have played a significant role in shaping Brownlee.

Even prior to the building's completion in 1997, the staff at Brownlee participated
in a two-day retreat during which they voted to become a member of the League of
Professional Schools. In doing so, members of the school were committing to developing
a covenant of beliefs about exemplary teaching and learning and to enacting this
covenant, to improving teaching and learning, through a critical study process and a
shared governance structure. During that retreat, Brownlee staff mapped out what the
League framework would mean for them as a school community by answering the five
guiding questions developed by Emma:

- Who are we?
- What do we stand for?
- Where do we focus our time, energy, and resources?
- How do we organize ourselves?
• When will we do things? (Brownlee Behind the Music Discussion Guide)

Today, when Brownlee staff reflect on that retreat, they speak of the power of the experience, still marveling at how, through a series of consensus-building activities, they came to realize, first in small groups and ultimately as one group, that they all stood for the same thing - children and learning. Out of this coming together, this "deciding what they wanted to be about," the staff developed their covenant for teaching and learning. Brownlee's covenant, which is entitled "Principles of Teaching and Learning," stands in the front hall of the school and states:

We believe:

Learning is the ultimate goal of our school.

Learning is a life-long experience.

Learning is an active process involving collaboration among students, teachers, families and community.

Learning is supported by a caring, safe, and inviting environment.

Jack Hoover, assistant principal, describes the significance of forming the covenant:

The covenant was how we came together with our beliefs. It brought our thinking about teaching and learning together….That was extremely important in our creation because people coming from different areas were able to say "Oh wait, we really all do believe the same thing." Unless you actually sit down and talk about it, you don't know that. You think Special Ed doesn't believe what art thinks and that is not true. So that tore down walls.
In a separate conversation, Barbara Brady, technology coordinator and teacher for gifted children, echoes Jack's sentiment:

With the covenant, . . . we all have a common goal that is larger than any one of us. [It] allows us to be a community, allows us to work together with, possibly, people that we wouldn't even speak to on the street, because they're not somebody that we would be friends with. But because we share a common goal greater than ourselves, we're all joined to work together.

The Brownlee covenant is a living document that is revisited and, if necessary, revised by the school staff on a regular basis. During the beginning of the 2001-02 school year, Brownlee staff participated in their own version of MTV's "Behind the Music," by gathering for a day to share the school's history, including how the covenant was developed. They recognize the importance of retelling the story, with new and veteran staff, if this way of "doing school" is to continue to thrive. Further, just this past March, Brownlee staff met to discuss if the covenant still represented what they believed about teaching and learning. They affirmed the covenant and developed a mission statement to provide a larger umbrella under which the covenant now resides:

The mission of Brownlee Elementary is to know each student by providing a variety of challenging learning opportunities and assessments which foster optimum development of the whole child (Brownlee Information Packet).

Other organizations have covenants or missions and often these statements hardly resemble in practice what is written on paper. Yet, Brownlee's commitment to living their covenant is evident in the day-to-day practices of the staff and students at the school. For the staff, this means brainstorming ways in which the faculty can facilitate students' first-
hand knowledge of and experience with good teaching and learning. The following partial list, generated during the school's across grade-level Talk Team meetings, provides a sampling:

- Post the covenant in classrooms. Develop one in students' language. (Discuss and post what makes a good student, teacher, and school.)

- Students work cooperatively and hands-on, assume team roles. (All staff members continue to model this by working collaboratively with each other.)

- Chart how adults learn. (Students bring ideas from parents. Mom learned to use the computer; dad is in a new class.)

- Students write and post individual learning goals.

- Students participate in making decisions about classroom operations and assessment practices (Brownlee Information Packet).

In the classrooms, I witnessed these and many more strategies being used to bring Brownlee's Principles of Teaching and Learning "alive" for students. One example came to light when I spent the day with Marie Conlin's fourth grade class:

Researcher Log, March 22, 2002: Math is next. Marie tells me that she will not be doing direct instruction but rather assessment because she needs to know where the kids are with fractions. Her fourth graders participate in an assessment activity during which both Marie and the students assess their progress. They move in small groups through five centers, each emphasizing a particular skill set. At each center, the students problem-solve a set of scenarios. Marie encourages them to use manipulatives and other strategies they've learned to try and get a picture for
the problem. Marie remains at one workstation. Here, she assesses each child by observing, asking questions, and taking notes. One group struggles with representing mixed fractions. With this group, she intervenes with some just-in-time instruction. Afterward, she shares with the entire class what she learned; what they have mastered and what they will focus on during the next class. She reminds them of certain strategies. Students turn in their work from all the centers. Marie reviews the rest of the data later.

Thus, Brownlee faculty stand for active, collaborative, life-long learning, as represented on paper by their covenant. Moreover, faculty consistently discuss and act on these beliefs with each other and with students.

*The Third Guiding Question: Where Do We Focus Our Time, Energy, And Resources?*

Where do we focus our time, energy, and resources? Having clearly focused goals is critical to us meeting the needs of our students. We need to begin our process of developing our goals and making decisions about what we are going to do in an effort to achieve our goals. We also need to think carefully about what we choose "not" to do because it would distract us from our goals (excerpt from Brownlee Guiding Questions document).

During one of our talks, I asked Emma Adams to reflect on Brownlee's first summer retreat and to describe her initial vision for the school:

I wanted some things to be real clear. I wanted our focus to be clear. I stated in those two days that I really wanted [our focus] to be on what was best for the students, not what was best for adults. That would be our criteria. I wanted us to look at information as opposed to feelings and personalities. I communicated
that….I wanted us to know our students well - that we had to really take the time
to get to know our students. Now I didn't know how that would manifest itself. I
didn't know that we would be doing running records every week in first grade. I
didn't have any idea of the depth that they would take it.

In order to facilitate progress in learning, the staff at Brownlee agrees with Emma that
they must know their students and know them well. Yet, curriculum standards and
standardized tests do not provide faculty with the basis they need to assess each child,
plan instruction, and provide appropriate interventions. Diane Shephard, assistant
principal and staff-designated "data queen," speaks to this deficiency:

[The county's academic standards are] an inch deep and a mile wide. The state
[standards] are very much like that. I think we need to get out of the idea that we
need to teach them something about everything and not much about
anything….The state assessments that [the students] are doing right now are
typical of this issue. When you get an assessment [report] back, it is either so
detailed that it's cumbersome to use, or they cluster group the skills so you really
can't use it at all.

For example, we have a category on our test that is grammar, usage,
mechanics, and spelling. That's one category. Tell me what you know when you
get that score? Is it that they can't spell? Is it that they have no syntactical
knowledge of sentence structure? Is it that they don't understand? And that's the
score that we get back - GUMS. And then they say, "Well you can teach when
you have that information." I say, "No you can't! You have to give another test
because you don't have enough information." And that is standard of what's going on across the country now. That kind of feedback is woefully insufficient.

In response to the inadequacy of standardized test results, Brownlee staff have made customized assessment data the focal point in making decisions about teaching and learning. The staff at Brownlee assess their students all the time and in many different ways. Teachers do use some prepared "paper and pencil tests" and these data, to the extent that they are useful, are used to make decisions about instruction. Yet these assessments alone, like the state and county tests, are deficient in enabling them to know their children as learners. In order to deeply know their students - where they are currently and where they need to go next - staff pursue extensive and varied assessment. In fact, assessment occurs, formally and informally, on an "as needed basis" - which, as I witnessed with Brownlee, means daily. Diane explains:

We design our own in-house assessments, we look at what the kids need, and we go from there. Instruction has to be assessment driven, because if you don't know where they are now, you don't know where you're going. You don't know the path. And we're becoming more savvy. You'll hear conversations, like in SST this morning, about how teachers are working with students. Talking about Jonah and what his errors are in reading; it's real intense because they look beyond the surface. They don't just say, "Oh, he has a decoding problem," end of story. Many places, that's all you hear because that's all they know. It is different here because people are not satisfied with surface level knowledge, and they know there's more to know.
A Student Support Team meeting (SST) requires the teacher, an administrator, and any other professionals who may be integral to addressing the child's academic/behavioral issues; includes contacting the child's parents to encourage them to attend and participate; and results in a documented plan for intervention. I attended the SST meeting to which Diane refers and, I can confirm that it was intense. For one particular teacher especially, who is working with Jonah one-on-one, you could hear the determination in her voice. She was going to get to the bottom of this child's struggle. She was going to help him read more effectively! What was even more fascinating about this observation is that it did not begin or end with the SST meeting. This child and his specific reading behavior had come up as I observed and spoke with other staff members on other days. On Tuesday, Emma would talk to me about Jonah struggling with reading. On Wednesday, I'd catch a team of school professionals discussing Jonah's needs in the SST meeting. A week from Wednesday, I would be observing Hope as she facilitates a one-on-one Reading Recovery session with a young boy:

Researcher Log, April 17, 2002: As I observe, it dawns on me, *this* is Jonah! I know Jonah. When he reads, he repeats sounds at the end of his words. Oh, there he goes. I know something about Jonah as a reader and I'm not even a staff member in this school. I've never even met Jonah before! They are not kidding - these people know their children.

Interestingly, I had this experience with more than one child in my time at the school.

In my time at Brownlee, I observed teachers using customized criterion-referenced paper and pencil tests, interviews, observations (often including the think aloud protocol), rubrics, and surveys to collect data on student academic progress in order
to make decisions about instruction. Formally, regular classroom teachers collect pretest, mid-year, and posttest data in reading, writing, and math using their class profile lists. Class profile data are collected, analyzed, reported, and stored by individual student, by class, and by grade. Individual student data is passed from teacher to teacher as the child moves to a new grade.

Reflecting the school's commitment as a League school to a critical study process, when a Brownlee teacher needs to help a child move forward, that teacher begins by identifying what it is he or she needs to know about that student, collects and analyzes the data, and implements an intervention that, in his/her professional judgement, will move that child forward. At Brownlee, staff members know their students through assessment. Assessment drives instruction. This is what you will hear the staff say and this is what I observed.

At Brownlee, the keen focus on assessment has played a critical role in supporting yet another focal point, reading. From the school's inception to the present day, Brownlee has prioritized its curricular goals devoting its time, energy, and resources in purposeful ways. Once again, as Emma describes, it all began with that first two-day summer retreat:

We identified reading as one of our important goals during that first two days. We asked ourselves, "What do we want our kids to know when they leave here?" If we are going to be focused what are we going to be focused on? And we won't do all of these equally well. We did the same thing then that we did last Friday, using [fake] money to brainstorm where the values were….We gave everybody a hundred dollars and asked: "How will you spend your money?" Reading came out on top, way on top, during that first retreat. And we've stuck with that because we
still see through the data that [reading] is one area to continue to work on. We added writing our third year, really started exploring that. And now, we are adding math.

Once reading was identified as a focal point, the faculty worked on mapping out what that would mean for the school. Together, the staff developed their Reading Philosophy. It begins:

We believe good readers are able to:

- Understand and make meaning of texts for a variety of purposes.
- Apply and relate what they have read.
- Know when reading makes sense.

So that they confidently and enthusiastically choose to read (Brownlee Information Packet).

In addition, the staff identified first grade as a critical juncture in developing good readers. As Hope puts it, "It is the window of opportunity." In effect, they chose as a school to invest more resources here, placing more personnel in first grade, limiting class sizes to fifteen, choosing a one-on-one instructional strategy in Reading Recovery and developing a small group strategy called Reading Express. The emphasis of resources in first grade meant that other parts of the school would have to get by with less; but the faculty decided together that these decisions were in the best interests of the children and the school. The intentional focus showed dividends early on. In its first year, Brownlee advanced their first grade population from 40% reading on or above grade level in August to 80% on or above grade level by May.
Serving as a focal point for five years, Brownlee has made strides in reading that, although originating in first grade, continue to disseminate throughout the school. Success in first grade bred enthusiasm and interest from teachers in other grades. Some practices are now deeply embedded in the culture. For example, in reading, Brownlee teachers use an observation checklist as they listen to each child read in order to track errors and the use of strategies.

The observation checklists vary in complexity and focus from kindergarten through fifth grade. A kindergarten checklist may focus on letter, number, color, and word recognition along with basic reading concepts such as moving left to right. By second grade, there is an additional focus on reading comprehension. Second grade running records include comprehension errors and strategies along with prior skills. By fourth grade, the reading checklist has evolved into a more sophisticated instrument, the Individual Reading Inventory (IRI), that includes error- and strategy-checking on such things as using character, setting, and so forth to retell the story, making logical inferences, and relating main ideas to the self (Brownlee Observation Checklists).

In reading, a Brownlee teacher knows through such data collection and analysis if a child is reading above, on, or below grade level. More discretely, a kindergarten through second grade teacher knows what level a child is reading on according to Reading Recovery, a more discrete benchmarking system with levels 1-24 for the early grades. Reading Recovery has proved so successful in improving student reading in the early grades that Brownlee located an assessment system with discreet reading levels that extend through fifth grade. PM Benchmark was piloted this year and will be implemented school-wide next year.
Early on, Brownlee staff did not just decide on what they *would* do but also what they would *not*. Emma Adams offers an example:

[When it comes to] doing what is best for kids and staying instructionally focused, one of the things we talked about during those first two days, that really has become just the way we do things, is that…we are not going to reward kids for things that they ought to do. So, if they turn in their work every week, great. That is what we expect them to do and we are not going to dance on the table because they did. Let's have that be the expectation, or the norm [upfront].

We communicated that to parents too; that we aren't going to have parties all the time. That was not well received by the community….They want their kids to be happy and have fun. That first year, we really had to work at explaining that we can make learning engaging and fun - that it is not sitting there doing worksheets, but it is not a party either. There is a purpose to what we are doing. There is a purpose to this cooking activity. There is a purpose to what we are looking at in building models. It is not a party.

To this day, Brownlee remains committed to not letting academically unrelated parties distract them from their focus. This policy is well documented in the 2001-02 Brownlee Student Handbook on page 17 under a separate heading entitled "Parties."

*The Fourth Guiding Question: How Do We Organize Ourselves?*

How do we organize ourselves? This conversation will enable us to think about how we want to communicate with each other, who do we meet with and when, and what will be our organizational structure. We will also discuss how we will
make decisions and how we will study the results of these decisions (excerpt from Brownlee Guiding Questions document).

Brownlee has an intricate and dynamic formal communication system in place that promotes a very open and collaborative organizational environment. This system immediately engages newcomers with the school culture; enables staff to learn about and develop trust in the individual expertise of staff members; enables best practices to be celebrated and shared; identifies emerging concerns and challenges; develops content and interpersonal knowledge and skills in staff members; leverages existing resources; and provides a means for shared discussion and decision-making. Perhaps most importantly, the formal system for communication breaks down one of the major barriers cited in the literature faced by educators in K-12 schools, isolation from their colleagues that promotes a parochial and competitive school culture. The formal system, by its very existence and use, fills the white space between classrooms and offices, between teachers, administrators, and support staff, with dialogue. Further, while providing a reliable means for organized communication, the system also generates an abundance of informal communications and connections among school community members. Key components of the formal system are represented in Figure 1.

Beginning at the left of Figure 1, all grade levels, preschool special education through fifth, meet by grade level on the fourth Tuesday of every month to exchange ideas, plan curriculum, identify challenges, develop resources, determine logistics, and make and implement decisions that are specific to that grade level. Ann describes the type of collaboration that I observed while sitting in on several different grade level meetings:
We have so many strengths on our grade level. I am not strong in everything. Melissa is very strong in math and she can make great sheets that go with activities for the kids to do. She helps us there. And, Roberta is very strong in reading. She helps out with interventions.

![Diagram](image.png)

**Figure 1.** Brownlee Communication/Decision-Making model. Adapted from Brownlee Information Packet.

The grade level contact, a position that rotates among the grade level teachers each year, facilitates these monthly meetings, often takes responsibility for administrative duties such as ordering materials, and serves as a liaison with other members of the school. However, the grade level contact does not manage, hold authority over, or assume responsibility for the group. In line with the principles of democratic governance, responsibility is shared and self-responsibility is valued. Ann, who is grade level contact for second grade this year, makes this point about grade level contact and other facilitator positions throughout the school:
Don't let the titles of people fool you because somebody may be on FCL, the Focus on Children and Learning Committee, somebody may be the grade chair, but that doesn't mean they're responsible for everything....We have two new people on grade level this year - out of four, so that's a big thing. I'm the grade chair. I realized the beginning of the year that they were coming to me and saying "you need to go" or "would you go tell so-and-so" or "this is a problem, could you go fix it" and I'm thinking, "No!" (laughter) And, I realized they're coming from a school where grade chairs took care of things for the grade level. And we don't do that here....Somebody may have a title but that doesn't mean that they're in charge. You know, you're in charge of yourself.

Kid Talk is a specialized grade level meeting that occurs every second Tuesday of the month. Kid Talk is focused on those students who are currently struggling academically and/or behaviorally. It is a time when anyone on the grade level may share information about the learning challenges that a particular student is experiencing in order to brainstorm with colleagues ideas for how to help the child overcome these challenges. Kid Talk leverages the local expertise and resources of the grade level staff, adding a means for proactively helping a child to get back on track rather than potentially waiting for challenges to escalate and ultimately require a more formal intervention such as an SST meeting.

Brownlee's Talk Teams together with its Focus on Children and Learning Committee (FCL) are a key element to the school's success as a community keenly focused on meeting the learning needs of students. Talk Teams meet on the first Tuesday of every month. The FCL meets the first Monday of the month and, as needed, on the
second Monday. All staff members at Brownlee are randomly assigned to a Talk Team so that each team is diverse in its make-up. The FCL is comprised of volunteers throughout the school along with the school's administrators. Each voluntary member of the FCL serves as the liaison between the FCL and his/her Talk Team. This liaison is responsible for communicating all items raised by the Talk Team to the FCL and, in turn, communicating issues and decisions from the FCL back to the Talk Team, as Marie described for me:

The point of Talk Teams is to communicate how we as a school are keeping the focus on children and learning….I am a Talk Team leader, I am an FCL member. We [the FCL] would meet with Emma and create our vision. Then I would go to my [Talk Team] group and just communicate it back, get feedback, what are they thinking, and then share that back [with the FCL]….And, it is usually very directed, it is not a real loose conversation. I mean it can be, it can be, if anybody has another issue, we take that. But, maybe it is about budget, maybe it is about staffing, or what is most important to you next year, that kind of thing. So it will be focused, but then there is an opening at the end for people to [raise other issues].

To facilitate this back-and-forth communication, meeting minutes are recorded on multi-part forms and then distributed to the appropriate groups or individuals. This documentation strategy is also used frequently in other areas of the school, for example between grade level groups and administration (Brownlee meeting minutes forms).

Talk Teams and the FCL do not simply exchange information about issues, recommendations, and decisions. When they raise issues, they also identify, generate,
and/or use data, as needed, to problem-solve and bring to light potential resolutions.

Simply by their diverse make-up, when Talk Teams and the FCL meet, membership in a particular functional group (third grade, cafeteria staff, etc.) is diluted while membership in the larger community (the school) is emphasized. Functional group factions are also diluted in that when an FCL member participates in an FCL meeting, that individual is not representing a specific work group, such as third grade, but rather the diverse assembly that constitutes his/her Talk Team. As a result, the Talk Team-FCL system is not simply a way to document and share issues and decisions. Moreover, the system promotes knowledge of and an appreciation for staff working in other functional areas of the school, a focus on school-wide issues, and a perspective that values decisions that meet the needs of the entire school rather than just one part. Jane speaks to the significance of Talk Teams:

> It's kind of amazing, I think, that some regular ed teachers have a lot of knowledge of what we do in [special education]. I think that goes back to the way the school is set up where we meet in teams that include people of all areas. That's our Talk Teams - where you meet with people across grade levels. I've never had that in another school. That's probably one reason why nobody knew too much about what I did. Not that the Talk Teams are focused on what I do; they're focused on school-wide goals.

The final component of the communication system at Brownlee is the Committee for School Excellence (CSE). The CSE links the school's teachers and administrators with parents and other community members. These meetings create opportunities for the larger community to participate in discussions focused on how to improve student
learning. The CSE provides a means for tracking Brownlee's Local School Plan for Improvement (LSPI), a county requirement. Brownlee establishes its LSPI at the beginning of each year, documenting major goals, supporting objectives, and intended methods of measurement. CSE meetings are scheduled to align with LSPI benchmarks, linking the school's goals on paper with what happens in practice. At the end of the year, Brownlee reports on LSPI results, conclusions and next steps. In recent years, Brownlee has used the LSPI system to support the achievement of school goals in reading and writing (Brownlee LSPI FY 01 Results Report).

Just as important as how school members communicate with one another is how they have chosen to make decisions and investigate the outcomes of those decisions. As a League school, Brownlee has committed itself to a shared decision-making system. Interestingly, I have heard Emma emphasize more than once that democratic governance does not mean that everyone participates in making every decision. In fact, she attributes some of her success as a leader to this important distinction:

I think one of the things that has helped me to be successful in this job is that I am real clear about the things I am going to make decisions on and the things others are going to own. I think this is what messes up a lot of people who try to do some sort of shared decision-making. They are never clear if it is their decision to make or not, and then everybody is confused.

To prevent such confusion, Brownlee formed a committee early on in its history to develop a decision-making continuum. The continuum documents the person and/or group responsible for specific decisions and how those decisions are made. For example, the administration is solely responsible for decisions in emergency situations whereas the
administration and staff establish LSPI goals and the supporting staff development activities as well as budget by consensus vote. The staff (with input from the administration, as needed) determines curriculum implementation, again by consensus while individual staff members decide on the implementation of discipline (Brownlee Information Packet).

As I witnessed during the March staff development day, Brownlee makes many decisions by consensus vote. Further, they use a variety of very simple yet effective techniques to achieve consensus, one of which is called "fist to five." When a vote is called, each person raises a hand that shows one to five fingers or a clenched fist. A rubric decodes the meaning of each symbol. Five fingers mean full support for a decision. One finger sends the signal "I don't like it but I won't block it." A fist means "I will block it or leave the group." Fists and low numbers indicate immediately to the group that more discussion is needed to surface divergent perspectives, reach middle ground, and/or help individuals clarify their positions (Readiness Testing of Consensus rubric).

On March 29, I witnessed Brownlee staff members use the fist to five strategy a number of times throughout the day, most of the time reaching consensus quickly on such things as their newly formed mission statement and math philosophy. Even if consensus is not reached in the time available, Brownlee has processes for staying on track. For example, Brownlee's physical education teacher led a session during which the staff revisited the school's covenant, what it means and how it came about. The staff discussed for 20 minutes whether the covenant still reflected their beliefs about teaching and learning or, if it needed to be revised. Suggestions were taken on revisions. Through several rounds of voting and continued discussion, strong consensus could not be reached
in the time allotted. In such an instance, it is customary for the staff to move on and trust a committee of volunteers with the final revisions. After 20 minutes or so, Jack Hoover encouraged those individuals who had expressed strong positions regarding the proposed covenant revisions to become members of the "final revisions" committee. The staff was then able to move on to the day's next agenda item.

The fist to five voting strategy is just one of a number of techniques that Brownlee staff use to support their commitment to shared governance. In addition, teachers discuss and model democratic decision-making with various student groups as well as students in the classroom.

Researcher Log, May 14, 2002: Barbara Brady spends part of her days working with gifted students. Her first grade group is wrapping up a book-writing project today. Once the students bind the books that they created, she leads them in a brainstorming session to develop a list of ideas for how they wish to share and celebrate their work because, as Barbara explains to them, "that is what authors do, they share their work." Each student offers an idea and reason behind it. Once the list is up, the students vote for reading their books to the kindergarten since these students might be creating books next year. After they vote, one student expresses his disappointment in the result. Barbara takes the opportunity to explain "That's democratic process. You all get a say even if you don't get your way - better than not getting a say at all."

Other examples abound. Claire asks her fifth graders to decide on how they will be assessed for a World War II team project. They decide on a self-evaluation using a co-constructed rubric. Ann leads her second graders in developing an agreed-upon list of
good learner behaviors. Staff sponsors lead members of the Brownlee Team, the school's student leadership group, in a lively debate and vote on the application process that will be used to form next year's team. The team is comprised of fourth and fifth graders and fourth graders do not think they should have to reapply to sit on the team next year. Through their work with each other and with students, Brownlee staff demonstrate shared governance in action.

*The Fifth Guiding Question: When Will We Do Things?*

*When will we do things?* We will deal with logistics of schedules, meetings dates, communications to parents and students, and how we want to handle routine procedures (excerpt from Brownlee Guiding Questions document).

Brownlee has developed a surprising number of public job-aids that facilitate how they operate day-to-day as a school and how they interact with parents and visitors to the school. For example, the Connections diagram provides a visual representation of how the school's beliefs about teaching and learning drive their LSPI goals that in turn impact student progress assessments which determine classroom practices. Job-aids such as Connections often appear in the school's documentation and its hallways. The "Who Do I Ask?" A-Z list serves as a quick reference for identifying the responsible parties in the school for everything from audio visual equipment to volunteer recognition (Brownlee Information Packet).

Brownlee has a master schedule that documents the weekly schedule for preschool special education through fifth grade, outlining such things as curriculum blocks and common planning time. From the beginning, Emma felt strongly about *when*
Brownlee would do things. With input from the staff, she continues to take sole responsibility for the master schedule. She explains:

I created a master schedule, so that we would have limited interruptions and limited transitions. I shared it those first two days….It paired lunch and an outside time, or lunch and a special. It moved ice cream into the lunch period, as opposed to going back later in the afternoon [to buy it]. I tried to not doing anything that chopped up the day so that people would have long blocks of time. I designated when language arts would be, when math would be, for each grade level so that, in turn, the resource teachers could look at the schedule and decide easily when to pull a group….So, it laid it all out for the entire school. It provided common planning time for teachers, which is very important. It was a comprehensive look of what does everyone need to be doing at a particular time - so that everyone else gets their work done.

Emma uses the master schedule as an opportunity to leverage the work of the entire school. It is evident that she has devoted a good deal of thought to developing it and adjusting it annually so that it continues to reflect school goals:

We designate, by virtue of how much time is allotted, what we value. So you won't see large blocks of time for Social Studies and Science, except in fourth grade where all four curriculum areas must be covered fairly equally. This year, we have tried to get fifth grade teachers to start thinking about teaching reading and teaching content through reading. I don't believe you can teach reading through content. To me, there is a real distinction. I know they have always felt pressured to teach the content of Social Studies. But, if you look at their schedule,
they don't have as much time as they have had in the past [for Social Studies] and that is real purposeful. They have more time in Language Arts. So, to teach some content in Social Studies, they can do a book study during Language Arts - [because] you cannot teach reading and reading comprehension using Social Studies.

There is less to say regarding Brownlee's fifth guiding question. This, in and of itself, is representative of the school community's priority: a focus on children and learning over logistical matters. By thoroughly documenting and communicating the details of schedule, routines, meetings, and so forth, Brownlee prevents these important, but not urgent, issues from diverging limited time, energy, and resources from pursuing their primary goal, improvement in student learning.

Reflections

In this chapter, I have presented a picture of Brownlee Elementary and how the administrators, teachers and others there "do school" using the five guiding questions that the staff used in designing this school as a unique place for learning. The data demonstrate that Brownlee is a school keenly focused on meeting the learning needs of students through continuous improvement in teaching and learning practices. Yet another representation of the school is Brownlee's Framework for School Renewal. This framework was adapted from one put forth by the League of Professional Schools. As pictured in Figure 2, it conveys the school's commitment to renewal by utilizing its covenant, shared decision-making model, and critical study process to maintain student learning at the center.
In the chapter to come, I draw out the major dimensions that enable Brownlee to sustain its unique character while continuing to move forward.
Chapter Five

Dimensions

*Learning cannot be designed:* it can only be designed *for* - that is, facilitated or frustrated (Wenger, 1998, p. 229).

When Emma Adams and I sat down to talk, I asked her about her philosophy of leadership. She delighted me with the following:

My philosophy of leadership?…You have got a glob on your table. And my philosophy of leadership is that I need to keep the glob as one whole glob. And it can't roll off the table, because the table is really what we are about, and if it starts rolling off, it falls apart. If it starts separating, we are not good. We have to stay one glob.

I confess, my immediate reaction was puzzlement, "What is this glob she was talking about?" Later, it occurred to me. It is the *answer* to my research question: Who is this school and how is it able to sustain itself?

So, what does one envision when a person says the word "glob?" I envision an amorphous entity, one entity, but certainly amorphous. A glob changes shape. It oozes out in one direction while it contracts in another. It *moves* as it changes shape. It is hard to keep a hold of a glob. It is slippery. Brownlee is slippery. Maybe this is why several staff members have wrestled with the same question that I, and others, have posed to them: How is it that you have come and continue to be? Hope expresses it this way:
I for one am glad you're doing [the study] because from the very beginning, I have wondered the same thing. How is this happening and is it going to continue? At first I thought it was a honeymoon, the first year or so. But here we are into our fifth year and this is the real thing. And I have often thought to myself how and why is it the way it is here? The story has got to be told because this is so unique.

I've been enough places to know that this is unique.

Obviously, I agree with Hope. Brownlee is unique. But how do you tell the story of something in motion, of "the glob?" In Chapter 4, I provided a portrait of Brownlee and how they "do school." But, how do they remain one glob and keep from rolling off the table?

In Chapter 5, I turn to the second research sub-question: What are the major dimensions that enable such a school community of innovators in teaching and learning practices to create and renew itself? In response to this question, I draw out three key dimensions that enable Brownlee to sustain itself; to create and recreate itself while preserving its essence - a school keenly focused on meeting the learning needs of students through continuous improvement in teaching and learning practices. The three dimensions are alignment, connectedness, and inquiry. As described in detail in Chapter 3, I developed these dimensions from the research data by using the constant comparative data analysis method.

In this chapter, I provide a description of each of the three dimensions. Additionally, I offer a critique of each dimension, presenting those issues that may threaten the dimension and thus, the vitality of Brownlee. As I describe each dimension, I draw connections to the literature presented in Chapter 2. Further, I call on a specific
element of Wenger's (1998) work on communities of practice, his model for a learning architecture. I encountered this model after I had already developed and named the dimensions of alignment, connectedness, and inquiry through my data analysis. Because I use the model to support my description of these dimensions, it is necessary to provide an overview of it here.

According to Wenger (1998), a design for learning, one that facilitates but cannot guarantee learning, requires a learning architecture made up of three interacting modes of belonging in a community of practice. These modes, as named by Wenger and illustrated in Figure 3, are engagement, imagination, and alignment.

![Figure 3. Adaptation of Wenger Learning Architecture.](image)

Wenger suggests certain facilities for supporting the work of each mode. For example, alignment is supported by the facilities of convergence, coordination, and
arbitration. Wenger then offers a non-exhaustive list of examples of each facility. For instance, he proposes vision and shared understanding as two examples of how the facility of convergence supports alignment in a community of practice. Although at times esoteric and again, incomplete, certain examples of facility in Wenger's architecture are helpful in characterizing the dimensions that I identified as a result of this research and outline in this chapter. I make associations when useful.

Once again, the dimensions that enable Brownlee to create (and recreate) its character are alignment, connectedness, and inquiry. These dimensions are manifested on a number of levels, both individually and communally, in classroom practice and professional development activities, across administrators, teachers, and students. After providing a description and critique for each dimension, I close the chapter by eliciting the relationship between them; that is, how they interact to sustain Brownlee. For like any system, each element brings something unique to the school but, without its interaction with the others, is insufficient in keeping the glob on the table.

_Prelude_

Since mid-March, I have been trying to "see" the organism called Brownlee. My researcher log is filled with a progression of diagrams, documenting my endeavor. The early ones are rudimentary and resemble cognitive maps. As first attempts, these typologies stand separate from each other and incomplete. Category names vary and are sometimes disconnected. A later drawing, I shared in a job interview research colloquium. One audience member pointed out with enthusiasm, "It looks like a crystal ball!" "No," I thought to myself, "that is definitely not what I was going for!" As I progressed further along in data collection and themes began to arise, I started drawing,
and redrawing, individual elements - a net for connectedness, arrows for alignment. But, how did they relate?

It was mid-April and I was getting frustrated. As one of my committee members and I agreed with humor, I had hit the wall! Fortunately, I was due to go out of town, back to the Jersey shore, for the wedding of some dear friends. As I walked the beach, looking out at the water, it just began to fall into place. At least in my mind, Brownlee was the ocean. This metaphor was helpful to me in connecting the elements, in being able to see, in my mind's eye, Brownlee as a whole yet, with parts; some of which I had named already and some that would come later. Some time after my trip, an entry in my researcher log laid it all out for me:

Researcher Log, May 23, 2002: In my time with Brownlee, I kept coming back to the image of an ocean. An ocean has great energy, force, power. It ebbs and flows but, it does have intentional movement up against the beach, the shoreline. The beach is solid. The beach changes but is less fluid than the water, the waves. The waves are always in motion, picking up and depositing sand, as they spiral forward.

There are so many elements in the ocean. The diversity of living creatures; they all have individuality. The variety of food sources; resources are in abundance - some used, others not. There are the different relationships of engagement in the ocean - one fish eating another smaller fish; or one hopping a ride on a shark.

I just keeping picturing these fish, this group of fish, moving through the ocean together. We've all seen a school of fish, a school of bluefish, and how they
create a shadow that you can track from a distance. The group is moving in a particular direction and it has form in and of itself. Yet, it is made up of individuals and some are in front, some are in the middle and some are behind and then, they might switch places. But, together, they have form. They are connected. The ocean, the water - that property of water that makes it sticky, high surface tension; that is their connectedness. Water fills the spaces between the fish. The ocean is complex.

Metaphors are useful in that they build understanding. Yet they are also imperfect. Metaphors always break down. They often must have personal significance in order to be meaningful. The ocean is my metaphor for Brownlee. I begin each of the following sections with a brief slice of the ocean metaphor because it reminds that the section is a part of a much larger, more complex whole and that the boundaries between sections, although useful in organizing a chapter, are artificial and limiting. If it is not useful to you, perhaps you can replace my ocean with another image; one that reminds you of the whole as you get to know the pieces.

Alignment

A school of bluefish creates a visible shadow on the ocean's surface that you can clearly see from the beach. Although made up of many individual fish that vary in place, the shadow moves as one toward its destination.

In my data analysis process, alignment was the first theme to emerge and it emerged strongly. According to Wenger (1998), alignment supports a design for learning by connecting learning to larger enterprises. In effect, individuals learn that they can contribute and have impact outside of themselves, an idea reminiscent of how Barbara
Brady describes the significance of Brownlee’s covenant: "We all have a common goal that is larger than any one of us….We're joined together to work together." Or, as Marie Conlin puts it, "We have the same horizon we are headed toward."

Wenger (1998) points out that in order for alignment to contribute to a design for learning, it must include room for such elements as a vision, shared understanding, and sources of allegiance and inspiration. In routinely attributing Brownlee’s success to Emma Adams, staff members clearly convey a strong allegiance and admiration for their principal. In turn, by tapping the expertise of her staff, Emma inspires them to stretch. As Ann Stewart describes during a focus group meeting:

I thought I was a good teacher at [my former] school….But, until I came here, I didn't realize what I could be. [Emma] pushed me, not in a mean way but, you know how she does it, "Do you mind standing up and sharing about that writing thing you're doing?" Then, you start to have more confidence in yourself and you start to branch out in ways that you didn't realize you could.

As demonstrated in Chapter 4, Brownlee not only has documented visions in their covenant, mission, and reading, writing, and math philosophies but, importantly, these visions were co-constructed by the entire staff in a very consistent and public way. Brownlee's covenant, mission, and three philosophies, by virtue of how they were first written and how they are revisited and revised, embody shared understandings among staff members. They represent, as Wenger (1998) calls it, the joint enterprise that is negotiated among the members of a community of practice; or, as Senge (1990) describes, the shared visioning of a learning organization.
Brownlee is further aligned in that visions such as the covenant are not only shared among the staff but between staff and students. While reflecting on those elements that enable her to be innovative with her second graders, Ann explains:

I think another [element] is the covenant, making your beliefs statement and making your room a democratic room. At the beginning of the year, we do a lot of team building and then we discuss, "What do you believe about learning? What kind of environment do you think you need to learn your best in?" Then, we develop those beliefs, we write them out and we sign them. And, it stays up on the wall. Every once in a while, I walk over to it and remind them "You said that you believe this."

Similar to Ann, Claire Todd co-constructed a shared vision with her fifth graders early on in the school year. Their mission, definition of success, and individual and group learning goals (including Claire's) then found a permanent home for the year on the bulletin board at the entrance to their classroom.

The shared focus on students and their learning is so keen that teachers work to create that same alignment in students. Diane Shephard explains:

I think that expectations are high of the students. I think that teachers expect students to participate. And I mean *really* participate - to have a sense of knowing what they know, to be able to articulate some about what they know….It's about students having the responsibility, but not necessarily to memorize information, although that's a piece of it, but to create new knowledge for themselves. It's not the sage on the stage. It is about facilitating learning.
The first time I really recognized this was when Jack was still teaching first grade. He'd have these conversations with six year olds, it was all I could do to keep a straight face. [For example,] somebody's misbehaving during center time, nothing major, just not on task. He'd call them over and say "What were you doing?" and they'd report whatever it was. And he'd say, "What are you supposed to be doing right now?" And they would say, "Learning." And he'd ask, "Are you learning anything?" And that was powerful because a lot of times we undercut kids. We don't expect them to do what they're capable of doing. And here was a teacher saying, "I expect you to learn. Even at age six, I expect you to know whether or not you're learning. And you need to be able to talk to me about it."

And that was really different than a lot of places I've been. I was at a school where a teacher's whole class did poorly on a test. She was very upset about it and angry with the students. I said, "If you really want to find out what went wrong, ask them. Ask them what happened." Her response was a punish assignment. "Write me a two-page essay about why you did badly on the test." Completely missed the point. But see, therein lies the difference….That is not how teachers think about it here.

At Brownlee, both the products and processes of visioning manifest themselves throughout the school. Whether it is with the faculty or with a group of students, time is devoted to developing and revisiting a common vision for learning. Further, the vision is not handed down or constructed by a select few. Rather, it is collaboratively created to
foster personal meaning. As such, the members of this community seek alignment of their vision, their focus on children and learning, both horizontally and vertically.

Interestingly, during their individual interviews, Brownlee staff members progressively revealed to me a shared definition of success when it comes to their students. As Barbara articulates:

I believe that every child is capable of learning. It may not be at the same rate, or to the same extent, but every child will have success. Every child will see success. Success will mean that they show growth. They go from point A to point B.

Other individuals share Barbara's belief about student success. In sharing her expectations of the faculty, Emma explains to me, "I expect them to treat kids with respect and do all they can to make sure that [students] are successful; that they are moving on to the next stage, whatever that might be."

Barbara extends her thinking about student success further by adding how this shared definition of success aligns the staff:

We have a core of people that really put the success of all children first. No child is going to be left behind….That feeling is contagious. When you get a core of people that have that belief and then they do something to change and see success, others that may have been reluctant to take the step on their own, don't want to be left behind.

In our one-on-one conversation, Jack Hoover expands on Brownlee's shared definition of success to include how it is measured and how it is used to advance learning:
To be successful is different for every [child]. It would be the child that improves in reading, documented growth in reading, and for the child to know that. It is not just for the teacher to know that the child went from stage 4 to stage 10, but for the child to know that. To see growth in math, or whatever; but it would be the child either announcing his growth, or the teacher sharing his growth with him. So, [the children] can actually see themselves, "Hey, I learned and I moved on, and I can do this."…Now, there is a lot of success that goes on - with reading levels, and test scores, and all that. [But] if the kids don't know they are succeeding then they don't know - there is nothing they can do. So we have tried to show kids, "This is where your test scores are and, this is where you need to be. Or, these are how many [academic standards] you have mastered and this is where you need to be."

As reflected in Jack's comments, student success at Brownlee is measured through the use of data. Further, data is shared with students and among the staff. Twice I witnessed the Brownlee staff gather together to publicly share (and celebrate) their students' successes; reporting reading, writing, and math class profile data at faculty and staff development meetings. Further, the staff participates in Data Discussions scheduled at intervals throughout the year to examine and improve their use of data to study their students. These practices point to another aspect of Wenger's (1998) learning architecture; that the joint enterprise around which members align requires mutual accountability in the form of measurements, data collection, and accounting. Brownlee employs shared measurements (Reading Recovery reading levels; writing stages), data collection methods (running records; pre-, mid-, and post-year assessments; interviews,
surveys) and feedback systems (class profiles, LSPI goal reporting, Data Discussions and other meetings) to account for, assess, and improve progress toward their vision.

To support the alignment so essential to a design for learning, Wenger (1998) suggests the necessity for additional community elements such as standard processes and schedules, the distribution of labor and authority, and common styles and discourses. In Chapter 4, fist-to-five was described as just one of Brownlee's standard processes for enacting shared governance through consensus voting. The process by which community members develop vision statements such as the five-year old covenant or three-month mission statement is yet another. The process, as I witnessed at the March 29 staff development day, goes something like this:

Researcher Log, March 29: Gayle, a fourth grade teacher, facilitates. She sets the tone with the staff by describing what a mission statement is and providing some examples. Already, there is a high degree of dialogue among the group. The facilitator randomly divides the staff into eight groups. Each group composes a mission statement. Next, the facilitator condenses the eight groups down to four. Each group of four compiles their two mission statements into one and posts this statement at the front of the room. After each group reads its statement aloud, the staff clap and cheer - just like the students do during Writing Celebrations, except the staff is much louder!

From the four statements, the staff develop and post a list of common key phrases. From these, one mission statement is constructed. Oh, and one more thing, prior to moving on to the next agenda item, the staff at each round table complete a brief assessment rubric to provide data to the facilitators on how they
are doing so far with their process. They assess what they are doing while they are doing it, a little just-in-time formative evaluation.

As I witnessed at another meeting, the Brownlee Team, the school's student leadership team, uses many of the same processes to govern their work as the adults do. At Brownlee, what the staff say they value - shared governance, assessment, and so forth - aligns with what they do with each other and with their students.

The master schedule for preschool through fifth grade, the staff meeting schedule, and the annual staff development schedule are representative of additional standards embedded in the culture that help to align Brownlee. Recall from Chapter 4 that the master schedule was developed purposefully by Emma to support school goals. For example, larger blocks of uninterrupted time are devoted to reading and writing, especially in kindergarten through second grade. The staff meeting schedule (Talk Teams, FCL, Kid Talk, and the like) enacts Brownlee's commitment to a school-wide focus on children and learning. With numerous session titles such as "Diagnosing Reading Problems," "Ongoing Assessments," and "Staging of Papers," Brownlee's Staff Development Plan provides support to staff in using assessment to drive instruction, another school value. The decision-making continuum and the rotation of leadership roles such as grade contact and Talk Team leader are a few of the means for distributing work and authority, shared governance in action (Brownlee Information Packet). Even the purposeful naming of roles and groups contribute to a school-wide discourse that supports alignment toward Brownlee's framework for school renewal and, in particular, the covenant. Jack explains:
We name [things] purposefully….We want them to be meaningful to us. So Focus on Children and Learning, we called it that because that's what it is. Kid Talk, talking about kids, that's what it is….Talk Team - actually, TALK stands for Talking about Learning and Kids - Team. That's what the Talk Teams are [called] because that's what they do. We wanted grade contacts. "Who do I contact in first grade? This year, it's Hope." That's it. Hope is not the leader. She is just the person we contact….It could be any one on the grade level. The FCL - we purposely did not choose those people because that would have designated them leaders. We wanted leadership positions to be [filled by] people who just wanted to be leaders in the school. We really are purposeful about that.

Boundary practices, practices that operate on the periphery of a community of practice are yet another facility to align members toward a design for learning (Wenger, 1998). Brownlee's annual book studies are an example of a boundary practice. Through the book study, Brownlee staff meet throughout the year in small, diverse groups to read, discuss, and apply new professional practices. This year, the special education faculty and the music teacher studied a book on music therapy, out of which a collaboration arose. The kindergarten through fifth grade faculty studied two books on writing in support of their LSPI writing goals. Importantly, the school's book studies, along with participation in classroom observations, professional conferences, and the like enable faculty to pursue activities on the boundary of their every day practice, all means for introducing novel ideas and approaches into the community. Barbara's description of how brain-based learning came to Brownlee is a good example:
We're allowed the opportunity to explore things that we find intriguing or that may be the answer for some kids - either through staff development, or through conferences, or going to visit other schools. Several of us were interested in brain-based learning, so we all got in cars and took a day to observe at Parks Elementary, that's a total brain-based school. Then, there was a brain conference at the University of Georgia. Four of us went to that conference. Hope heard about it and said, "Well I'm really interested in that. I want to know about that." We went, we brought it back, and we said, "Here, anybody that wants to learn about it, we're talking about it this afternoon." We shared it.

As any member of a community can probably attest, developing shared values and aligning practices with those values in not easy to sustain. As with any group of individuals, Brownlee faces its share of challenges to maintaining such a well-aligned community of practice. For example, this year, Brownlee experienced a high turnover of staff members, the highest to date. (The good news is that staff members left under positive circumstances, to pursue graduate work full-time, to be home with young children, and the like.) Further, Brownlee is not at full capacity. The school's student population and, therefore, faculty population, will continue to expand.

In a time of significant teacher shortages, Brownlee will have to locate quality new hires that appear to align well with the culture. The school has established a boundary practice to help meet this challenge. Through his graduate work at Georgia State University, Jack was hired as an instructor and supervisor for student teachers. This year, Brownlee hosted five undergraduates as they completed their student teaching. Through this boundary practice, the Brownlee staff, some of whom participate in the
hiring process as members of a hiring committee, get to see potential candidates in action. Further, they gain exposure to new ideas and practices taught in the Georgia State program. Although some new hires have come from this collaboration, it is insufficient in meeting all of Brownlee's staffing needs, especially for critical areas such as special education.

As described in Chapter 4, many Brownlee teachers are quite remarkable. They are ambitious, accomplished individuals who routinely seek new knowledge and experiences. Ironically, this strength can also pose a challenge to continued alignment. For instance, all of the study participants demonstrate a pattern of seeking new personal and professional opportunities in order to continue to grow. Many even named this trait as an integral part of their self-identity. After five very successful years in first grade, Hope was ready for a new challenge and moved into a reading specialist position that required a commitment to an extensive on-the-job and in-school training and certification program this past year. Likewise, after ten years in the classroom, Marie was looking for a different professional opportunity to renew herself and, the chances were good that she was going to have to leave the school to find it. Fortunately for Brownlee, Emma works hard to retain valued members. Marie will be inaugurating a new math specialist position at the school next year. To keep the type of professional that thrives in a culture such as Brownlee, the school will have to continue to create new opportunities for growth, which at an elementary school, can be limited.

With new hires, Brownlee faces the task of mentoring new members into the community so that they may comprehend how Brownlee "does school" and, gradually, become equal and contributing partners with veteran members. Brownlee is no longer the
new school of five years ago where all members began on an equal footing. The formation of power structures, to some degree, is unavoidable. Although minimal, I did witness sporadic evidence of an inner circle, a small group of staff members who seem to have more opportunities for leadership and professional growth than newer hires. Such an inner circle may delay or preclude newer faculty from feeling and acting as jointly vested in the school's enterprise, weakening alignment. Ironically, the attrition of some veteran members, if kept in check, may actually counteract the formation of potentially destructive hierarchies. It is, however, a delicate balance. An oversimplified statement for certain but, veteran members are needed to share and sustain the culture while new members are needed to challenge and energize it.

Of course, there are strategies to meet the challenge of aligning newcomers. Mentoring may be one of them. Brownlee has a mentoring system with scheduled meeting topics throughout the year. To date, however, the system appears to lack long-term, strategic alignment with Brownlee's school renewal framework, focusing, as one staff member framed it, on the nuts and bolts of surviving the first year. A new individual may indeed receive good mentoring but that largely depends upon the luck of the draw; the mentor, the mentee, and the success of this relationship.

In the past, functions sponsored by the League of Professional Schools, including the Fall and Spring Conferences, have served as an effective boundary resource for acclimating new members. However, the League is deepening its focus next year. League functions will no longer provide foundational experiences for members but rather focus on one aspect of its mission, service learning. Further, the restructuring plan requires that member schools send a smaller cohort of the same individuals to all of next year's
scheduled functions. Citing how meaningful League participation had been for them, a number of Brownlee faculty, veteran and apprentice, expressed concern over no longer having this resource to align new hires, develop and renew shared meaning among the staff, and enrich the experience of individual professional practice through outside activities.

Connectedness

Water is one of the few liquids with high surface tension, a property that causes people to experience it as sticky and elastic. Ocean water connects all living things within its bounds like an invisible weave. It fills the spaces, however mutable, between individual blues swimming as a school. The water also engages with things outside its bounds. Waves stretch for the shore and pull back, transforming the ocean and the beach in the process.

I identified connectedness as the second dimension of Brownlee that strengthens its essential character while continuing to foster growth and renewal. Referring back to Figure 3, Wenger's learning architecture, connectedness is akin to what Wenger (1998) terms engagement. Like alignment, the author argues that a design for learning must support the work of engagement. Wenger (1998) describes engagement as "activity, community building, inventiveness, social energy, and emergent knowledgeability" (p. 237).

Because of some conceptual similarities, I toyed with the idea of renaming my term connectedness with the word engagement to characterize the second dimension of Brownlee. However, engagement, by its very definition, implies conflict and contest. Further, although at times helpful in describing this second dimension of Brownlee,
Wenger's conception of engagement does not quite fit. I also considered the term collaborative for the second dimension. However, collaborative implies a way of pursuing discreet interactions rather than a way of being. Given the data, connectedness seems the most accurate descriptor for this dimension of Brownlee, implying a gentler mutuality of respect and trust, perhaps emerging initially out of dialogue but ultimately establishing itself, almost as background music, as sublety ever-present. As will be demonstrated, Brownlee's connectedness is not rigid and hierarchical or purely functional, like stairs stepping from low to high. Rather, this dimension flexibly extends and supports, like a constant, expansive, invisible net.

As with alignment, connectedness at Brownlee is expressed in different ways in the school community, formally and informally, among individuals and across the organization. Brownlee's rotating Tuesday meetings, shared planning time during the school day, regular data discussions, annual book study, and more foster ample "formal" opportunities for staff to connect in homogenous and heterogeneous groupings across the school. As Wenger (1998) puts it, Brownlee staff have "time for interaction", "things to do together", and "ways of belonging in various degrees" (p. 237). Jack identifies these formal and routine connections as an essential element of Brownlee's enduring character in that they build trust, openness, and collaboration:

Talk Teams bring people from different areas together so they can talk about common issues, [creating] community in a very isolated profession. Kid Talk has gone a long way to building trust and support among people working on the same grade level because [teachers] take their kids to the table with their concerns and their colleagues give feedback. It has really [promoted] people feeling like they
can go to others with problems and that they have information that they can contribute to somebody else….That one has gone a long way to building that cross-communication. In faculty meetings, we break staff up into different groups. Book studies are the same way - just another way of mixing the conversation together.

Jack continues by contrasting outcomes of Brownlee's connected culture with the more typical isolation experienced in the teaching profession, expressing that the former fosters:

[teacher] confidence, success, a sense of being important, feeling needed. The kids need her and the other people around her need her, to learn from. Stagnant teachers are the ones that are isolated. They are not asked for their opinions. They just do a good job, put out the kids they need to put out, but it stops right there. They don't feel connected to the school. [The innovative teacher] comes from recognized success and feeling connected to what is happening in the school as a whole, not just [in] her classroom.

In separate conversations, Brownlee teachers echo Jack's sentiments. When I asked Claire Todd if her previous school environment enabled her to be the teacher she wanted to be, Claire replied, "[Administration] was so uninvolved….When I first started there, I would give my opinions or suggestions and they turned a deaf ear. So, I started keeping my mouth shut and just went about my business." On another day, I asked Barbara how it would impact her work as an educator if the dialogue afforded through Brownlee's various meetings went away tomorrow. She responded with resolve:
I'd go look for another place to be! For me, it's very important, because I need to
be able to bounce ideas off of other people. I need the opportunity to share, but
also to listen, so that I can reevaluate what I'm thinking. And if I'm only always in
my own little world, and not looking at what other people are facing, then I really
lose the whole school perspective. We're really about the success of every child
here. We're not just about the success of the children that I see.

The numerous and varied ways in which Brownlee faculty meet and dialogue support two
of Senge's (1990) five disciplines of the learning organization, team learning and systems
thinking. Through their multiple memberships in diverse groupings, staff learn together
while maintaining a perspective that honors the entire school.

The focus on "the success of every child" has moved Brownlee in the direction of
grouping students dynamically not just within but across grades, yet another practice that
connects teachers to one another in their professional practice with unplanned positive
outcomes. Ann, who is currently the only second grade teacher who has been trained in
Phono-graphix, a reading innovation, explains how her success with students from other
classrooms is breeding interest and conversation in her colleagues:

All second grade teachers want to get trained [in Phono-graphix]. I see their kids
and they come to me saying, "Oh my gosh, Robert is reading on a [level] 19 now?
He's been stuck at a 15 for four months!…Tell me some of the things you're
doing. What are you doing that I can do?"

Unbounded by classroom walls, Brownlee teachers exchange students with ease in order
to best meet their learning needs. Success with one another's students promotes casual,
professional encounters between faculty, yet another facility supporting engagement
(Wenger, 1998). Thus, a practice based in putting student learning at the center, the focal point of Brownlee's framework for school renewal, results in new and more connections (and practices) among the staff.

As you might surmise, the dimension of connectedness extends well beyond Brownlee faculty to the students in a myriad of ways. In Chapter 4, it was demonstrated how the students at Brownlee are highly connected with one another within their classrooms through extensive small group interactions and beyond their classrooms through such activities as Brownlee Team, peer helpers, book buddies, and writing celebrations. Valuing the connections they have with each other, Brownlee teachers also work to link student learning to the world beyond the school. For example, this year, Marie's fourth graders made a personal connection to current world events using email and other resources:

We have adopted a Marine who is ship-bound. It allows [the students] to realize that there are other people out there. Many of them know about September 11th and the war in Afghanistan, but they don't have a direct connection. So we are in contact. We send him letters. He has our email [address] and he will email us back. We send him care packages. It gets them to think outside of themselves and it works on their writing skills. It gives them a connection, gets them to realize when they complain about having to sit in their seats for 30 minutes that there is a Marine that won't get off a boat for months. It puts things in perspective. I like to give them a different perspective.

On my second observation day with Marie, a long email arrived from their adopted Marine. Marie read it to the class as soon as the kids returned from lunch. Extending this
one example out, beginning next year, the Brownlee staff has committed to integrating service learning into the experiences of students, thus fostering more connections to the community beyond the school.

Importantly, the administrators at Brownlee pursue connections with the faculty and students through a variety of practices. They still teach on a regular basis. Emma meets three days each week with a small group of struggling students for reading instruction in the media center. Jack teaches collaboratively on the grade levels, last year with fourth grade, this year with fifth. Beyond teaching, Emma, Diane, and Jack all make a point of being out in the school rather than in their offices. As I experienced in my time with her, Emma eats lunch with the kids in the cafeteria and regularly visits classrooms:

Researcher Log, April 9, 2002: As we were returning to her office, I asked Emma about her frequency of visiting classrooms. She told me that she tries to get into every classroom in the building at least three times a week and, she usually accomplishes that. She explained that she varies her visits, never going in at the same time or on the same day, for any particular classroom.

Most of Brownlee's classrooms are connected by a doorway in the back of the rooms. So, Emma just weaves in and out very casually. Sometimes, she will enter through a front door, sometimes through a back door. You can tell that the teachers and the students are very accustomed to her visits because nobody reacts, nobody looks surprised, nobody stops what they are doing. As she encounters children on her path, she'll stop for a moment and say, "Well hi Joe, how's the new baby?" or "Hey Melissa, are you ready for your move?" You can tell by her questions that she is very aware of what is going on in these children's lives. She
is very connected. Besides feeling that it is important, Emma told me she likes doing it. She likes being out there.

Reflecting on the significance of her classroom visits, Emma shares, "It gives me a way to touch base with kids - say hello to some of them, be visible as well, so that I am someone [to them]. I want them to know who I am." Interestingly, when I asked Jack to describe Emma as a leader, he had this to say, "She is very available. You can always talk to her. She is visible. And when she is not visible, people ask 'Where is Emma? Is she okay?' They are so used to seeing her." Further, when asked about organizational elements that help her to be the teacher she wants to be, Claire replied:

It's the administrators. They encourage you. They are so visible! My first month here, I was shocked. The principal and assistant principal walked into my classroom almost every day, walk in and smile. They stand at the end of the hall when the kids leave, to say good-bye. They are so visible that, I saw a partnership between teachers and administrators. You don't feel that in every school….One school I worked at, the principal never came into my classroom the whole year, never walked in the room. I don't know if the kids knew him or not. I had to say, "Oh, that was your principal."

On my first visit to Jane Calamity's special education autistic classroom, I asked her if Brownlee was supportive of what she wanted to do as a teacher. Jane shared a response similar to Claire's:

Well, there's no doubt that, in this particular school, the support from the administration is above and beyond the support that I've had in any other school. I have been in a variety of schools and typically, principals take a hands-off
approach. A class is placed in their building, they’ve given you space and you operate out of that space, but you're not really a part of that school. The administration would say you're a part of that school but you're not. You don't really feel a part of that school.

And, I've been with administrations - principals, assistant principals - [who] really didn't even know the students in my class, had no knowledge of what went on....At this school, I feel much more involved. I'm much more a part of this school - just the way the school is designed, the way that leadership operates, the way the whole school operates. Of course, Diane and Emma, they both come into the room on a regular basis. They know all students. They meet with us as IEP meetings. And it's not just a token - [as if] they are there as a token administrator. They participate. That support is clearly here.

Beyond people, Wenger (1998) points to the importance of facilities and technologies also supporting engagement in a community. At Brownlee, the physical and virtual spaces support connectedness. The connected classrooms, the two-way intercom system, and networked personal computers provide even more opportunities for interaction. Perhaps most stunning, even Emma's room assignments from year to year play a role in fostering a design for learning. As I got to know the staff at Brownlee, I discovered that Emma has a habit of moving faculty around from year to year. In fact, it has become a bit of an "inside joke." In speaking about Brownlee's highly allied staff, Diane points to Emma's penchant for moving folks around from the first year:

The teachers are highly collaborative and supportive of each other. And Emma helped facilitate that. When we opened our doors, second grade wasn't all together
in a little group and first grade wasn't all together in a little group. Instead, you'd find those grade levels together, but spread out all along the hall. So the teacher next to you might not be on your grade level. It might be somebody else.

Curious about this intentionality behind all of the moving, I asked Ann, who has moved four times in her five years at Brownlee, about it. She shared a story that demonstrated the thoughtfulness behind something so seemingly routine as room assignments:

Researcher Log, May 24, 2002: Prior to the 2001-02 school year, the second and first grade classrooms were on the same hall. At the end of the 2000-01 school year, Emma made the room assignments for the coming year, moving second grade to another hall with third grade. Ann expressed some concern over this decision. Emma asked Ann to send her an email listing all the reasons why she felt second grade should stay with first. Ann compiled and sent the list that read, in part, "We exchange students, we share books and materials, we give each other ideas." Emma replied to Ann's email, "These are all the same reasons why I want second grade next to third."

Interestingly, prior to this conversation with Ann, I had already noted anecdotally in my researcher log that third grade seemed to be a weak link among the grade levels. Third grade faculty seemed to be struggling; just not as fluid in their work. It did not surprise me that Emma moved second grade closer to third, even if it meant potentially diluting a strong collaboration between first and second. If Emma sees an opportunity for a staff member or group to learn from another, she creates space for those connections to happen. Although she cannot design learning, she can design for it.
In Chapter 4, I characterized the teachers that I worked with at Brownlee as lifelong learners. Diane provides an even more specific and meaningful description:

They're public learners….They enjoy learning, they're curious. They're trying to meet the needs of their children and, they don't just investigate it, they actually do it. It shows up in the classroom and, it's not quiet behind a closed door. They're talking about it. People know they are doing it.

Similarly, Jack describes them as "seekers of knowledge and sharers of knowledge," explaining:

Those individuals actively seek out help from other people. They will go to somebody and say, "I like that idea. How did you do that?" They are not the holders of knowledge. They are seeking knowledge….They realize other people's strengths. And that right there opens up doors for collaboration because, in education, the best compliment you can get is for another teacher to use your idea….There is nothing better than that.

I also think that they are vocal about the changes that they have gone through as teachers, their new learning, the applications of what they've learned to their own teaching. But it never comes off as "I know more than you." It does not come out that way….They are vocal about their learning, sharing what they are learning, sharing how they have changed in their teaching. I think that is real important, sharing how they have changed things.

During our individual interview, Ann provides several examples of what Diane and Jack describe:
I always think of us as a group. This is "us" - we're second grade. And even, I guess, "we" includes a lot of teachers. I'm close to several teachers that aren't on my grade level that I will go [to] and sit in their rooms and talk to them about things - questions I have. When I taught fourth grade, I went to a first grade teacher and said "I need to know how to do centers. You've got to help me." They do centers in first grade but nobody did [them] in fourth grade. It's very much a "we" environment. My old school wasn't bad, I didn't think. But when I came here, everybody's door was wide open. You come in and you come out. You go to somebody and you can admit very freely "I don't know how to do this. Can you help me?"

Ann is an experienced, talented, and very capable teacher. She has much to offer. Yet, I witnessed her seeking ideas from her second grade colleagues on several occasions. Even with ten years as a teacher and five years at Brownlee, she honors their expertise. I asked each teacher in the study why they suppose their colleagues had identified them as innovative. Although it took a while for me to pull it out of her, Ann had this to say:

I guess because I've gone and learned about Brain Gym and I've gone and learned about Phono-graphix. I was shy in my old school. This school, I'm not shy to stand up and tell people in a faculty meeting "This is what we're doing." We read a book, *Classrooms That Work* and, that wheel over there (points to the Reading Wheel), that was a suggestion for keeping kids flowing through Reading Workshop and Writing Workshop. Stephanie, a colleague of mine last year, and I implemented it in our rooms and it worked really well! The kids would just move their clips to whatever they're doing. That was something that I stood up and
shared at a meeting. They just asked "Do you have any ideas for writing?" So, I'm not shy about standing up and sharing things. I think, maybe, people would see that as - they see me a lot - so they think "Well, she must have some ideas of doing things." (laughter)

Ann is representative of many of her colleagues. They are public learners. Along with the organizational aspects already discussed, this individual trait fosters even more and varied connections among the staff. They show initiative in learning with and learning from their colleagues (Wenger, 1998).

Although deeply connected to each other and their students, the staff at Brownlee struggles with forming meaningful connections with the larger community, both families and area businesses. As demonstrated by the extensive discussion at the March 29 staff development day, they recognize this void as detrimental to helping their children learn. Although I did see parents enthusiastically helping out in the school from time to time, they were typically the same faces. Disturbingly, I witnessed other parents who clearly were not all that interested in their children or their children's education. There was the parent who refused to pick up a child who was out of control. There were several who did not show up for scheduled SST meetings. Then, there was the parent who, during kindergarten pretesting, was more interested in chatting with her two friends than retrieving her five-year old son who had wandered outside with his toddler brother.

Brownlee appears to be at a turning point with parent involvement. They have a high level of awareness and open discussion about it. They see it as a problem that needs to be addressed. They have started on their way. Ultimately, they will need to make a school-wide commitment, develop a cohesive plan, and devote resources if they are to
extend their connectedness as a school to the greater community. Ultimately, more peripheral encounters with business and community members could serve as a rich learning resource for the school and even help to address pending concerns such as the growing student body and ESOL population. For example, having more parents and community members helping in the school could support Brownlee's commitment to individualized and small group teaching and learning. Having more parents read with their children, participate in SST meetings, and just get their children to school regularly and on time could certainly support academic goals. With more parents working full-time, Brownlee undoubtedly will have to meet parents where they are, devising innovative and flexible ways to increase community member involvement. However, by implementing a strategic plan, deeper connections with the community may prove to be an invaluable, as yet largely untapped, resource.

Inquiry

The ocean is in constant motion. Its currents express a duality as they wash over the school of blues, taking up and depositing sand, shells, and other particles. The surf, it moves in iterative fashion yet, all the while, its constitution changes. The waves ebb and flow in their progress toward the beach, eventually breaking on the shore.

Wenger (1998) names imagination as another mode of belonging that must be supported by a design for learning. As he states, "It takes imagination in order for learning to encompass and deal with a broader context" (p. 238), to open up new possibilities. Wenger's conception of imagination is certainly an important and present component at Brownlee. Yet, it is incomplete in that it does not reflect the community's
pervasive use of data to investigate and reflect on current practices in learning while they imagine and play with new ones.

I identified inquiry as the third dimension that empowers Brownlee toward integrating new approaches to teaching and learning that advance student success. As has been demonstrated, many Brownlee teachers are generally inquisitive, always wanting to know more, to do differently and better. Further, Brownlee faculty value inquiry in their colleagues. During a focus group, I discovered that several of the teachers participating in the study serve as members on the hiring committee at the school. So, I decided to ask them what qualities they look for in new hires. Several comments demonstrated how much they revere inquiry:

Barbara: Are they somebody who wants to learn?…Is it somebody that - you can see, there's a twinkle in their eye and they want to know more!

Hope: It's not someone who comes in knowing all the answers, [who] has their philosophy of education down pat. It's someone who is willing to put their head out there on the chopping block and say, "I don't know that. But, I'll learn it. I'm interested in it."

Claire: Risk-takers.

Later during the session, the teachers talk about the role of inquiry in teaching and how it is fostered at the school:

Hope: If you're honest about your teaching, you know you're not reaching everybody with everything you do. That's the reality of teaching. So, if you really
care, you're in a constant search for "How can I help this child on this day with this set of circumstances?"

Jen: Can I push you on that a little bit? Because, in the short time I've been here, I've learned of a child in this school who, in his previous school, the answer was "Well, he can't do it so he'll just sit next to the teacher and color." But the answer here is different. That child is, among other things I'm sure, in Phono-graphix and is having quite a few successes. So, what's the difference?

Barbara: We're allowed to imagine all the possibilities. We never knock on the door and have an idea and get told "No." [We're told] "Explore it. Let me know what's going on. See what you can find out. Try it. Get information." That isn't true in every school culture. This was shared in my class last night. A lot of teachers want to do things, they go to grade chairs, they go to principals and they're just told "No." If you constantly get told "No," you stop asking the questions. You feel helpless, you sit back, you say I'm doing the best I can and nobody wants to listen to what I have to say. We don't face that here at Brownlee. I can't think of any time that somebody has gone and said "I want to go to a conference, I want to" - anything you want to do - when Emma hasn't said, "Find a way to do and you can do it."

Ann: There was one thing that a teacher wanted to do that Emma had already read the research on. The research showed that it wasn't successful. But she didn't tell that teacher no. The teacher came to her and said, "I have this idea. I'd like to try this." And Emma replied, "Would you go do some research and let me know what
you find out?" The teacher researched [it] and found it did not show success. She came back and said, "Never mind." Emma let her figure it out.

Hope: Discovery method!

Claire: I was going to say, constructivism! (laughter)

Jack echoes the teachers' comments during our individual interview. When asked to talk about the school culture, he spoke of Emma and Diane regularly soliciting the expertise of the staff:

Emma and Diane are very open and actively seek people's advice and opinions….They consistently acknowledge people's superior strengths. Emma will go to people to ask about teaching strategies. I don't see that happening in very many schools because the principal or the assistant principal has got [the attitude] "I know how to do it. You are coming to me for help." Well [here], they come to us for help….Strength in reading instruction? "How can you help us lead the staff development?" That is very empowering. They see the strengths in others and they capitalize on them. Sometimes it is hard to put into words but, had we had the same people and a principal who said "This is how it is going to be," this school wouldn't have turned out this way.

Thus, inquiry is modeled by the administration in how they relate to the faculty.

Inquiry is not just a source for learning, about each other and about students, but often a force for renewal. This year, Claire piloted a new science program. She commented on the excitement and empowerment this experience afforded her and her students:
When [administration] asked if we wanted to go to look at new textbooks, I said, "Sure I will go!"...I figured this was a perfect opportunity to learn. To look at the text, the standards, what we are supposed to be teaching, and then, to dissect each book was really exciting. Now, we are piloting this (points to pilot materials)....And then I discuss it with my students. It is not just me that is in power. The kids know that we are learning from a new science book [that] we may or may not keep. And I am using their input, what they think about it. So it is empowering to them too....Then, we will make a decision. And I told [administration], "From now on, I will go to a pilot. If they want to pilot new math or social studies books, I will go." Because if you sit back and just let somebody hand it to you, when are you ever proactive? When do you ever have a say in what you teach? The only way is just to say, "Okay sure, I will be part of that."

The shared trait of inquiry certainly serves the school community well. Yet, conceivably, these teachers could devote a great deal of time to investigating and introducing educational innovations into the classroom and the school, while not having much of an impact on student learning at all. In Chapters 1 and 2, it was demonstrated that the literature is replete with examples of just such ineffectual innovations (Dillon & Gabbard, 1998; Fabos & Young, 1999; Means, 1994).

However, at Brownlee, I did not witness much "innovation for innovation's sake." On the contrary, I consistently observed innovation originating in an identified learning need. It is students' academic learning needs which initiate and drive how and when professionals working at the school decide to innovate. Learning needs are ascertained
through inquiry. If Brownlee did not know their students well through assessment, they
would be hard-pressed to identify specific learning needs. In turn, they may not recognize
a potentially useful intervention when it comes along, perhaps missing an opportunity to
experiment with a new method or tool that, in their professional judgement, may move a
child forward. Thus, by matching identified needs to existing innovations, Brownlee
teachers serve as the conduit to student success. In other words, it is the \textit{quality} of inquiry
that enables Brownlee to maintain its focus on students and learning.

Phono-graphix, a system for improving reading, is one example of an innovation
that was brought in to the school to meet the identified needs of a specific group of
students. Diane shares how it happened:

[Innovations] come from anybody who sees them and thinks that they meet the
needs. Cali Randall, who was doing Reading Recovery and Reading Express
work for us, stumbled upon information about Phono-graphix. About the same
time, Emma had also read something about Phono-graphix. They bought the book
and started reading it together. Cali tried it with some kids that she thought it
sounded like. She had done all the reading interventions that she knew to do with
these particular children and there was still not a significant impact;…three or
four upper grade kids who had not made progress. I'm talking about never making
a grade level's growth in a year. Jason Gray was a fifth grader and he had been
reading on the third grade level forever. We couldn't get him past there. That very
first year [using Phono-graphix], he left here reading on the fifth grade level. His
mother considered retaining him with us so we could continue whatever it was we
were doing, because it made such a difference….That's how it happens. It's not like it has to come from Emma or me or Jack.

When Cali Randall suspected that she had discovered something in Phono-graphix that might help a certain population of struggling students, not only was she encouraged to explore its potential but Emma joined her in learning about it and testing it out with a small number of children. Opportunities and tools for trying things out (Wenger, 1998) transform the seed of need-based inquiry into student learning at the school.

Importantly, when Brownlee finds something that meets a learning need, the school community does not typically jump in with both feet. Theirs is a measured response. Diane continues:

We decide how much commitment we want to make….We do not buy the whole package for anybody. That does not work. Nobody just gets assigned to Phono-graphix….They come through the SST. They have to be assessed. It has to look like a real need of theirs.

Clearly, Phono-graphix was meeting the learning needs of some students. Hope shares one fifth grader's comment during a data collection interview: "Bobby Most said to Cali, 'Miss Randall, you've changed my life because I couldn't read before and now I can.'" Once Cali and Emma witnessed such student success, a small group of teachers received formal training in Phono-graphix and brought the innovation to other struggling readers in the school. Ann was one of those teachers who, as she puts it, had to "muck around in it in our classrooms with our grade levels” before they determined how Phono-graphix might be used school-wide. That phrase Ann uses, "muck around," parallels
Wenger's (1998) suggestion that play is an important facility for fostering imagination in a learning community.

The second wave of teachers observed and documented even more student progress in reading, again with the identified population. Further, they began integrating Phono-graphix in with other successful innovations such as Reading Express, enhancing such well-established programs in the process. By this Spring, Brownlee had collected enough evidence of student success that they sent three staff members to be certified as Phono-graphix trainers. These teachers will be offering Phono-graphix training as part of this summer's staff development program. However, as with the school-wide introduction of other innovations, Phono-graphix training will not be mandated by the administration. Instead, as teachers hear of and see more student success, it is anticipated that they will pursue it of their own accord. As Jack and Hope both state with confidence, like Reading Express, "It's just going to catch on."

Thus, at Brownlee, a learning intervention does not begin with the innovation but with a need identified through inquiry. Further, an innovation is not viewed as "one size fits all" or "a magic bullet." Rather, it is targeted, by matching a specific learning need to a specific innovation through assessment. In this way, Brownlee leverages limited resources toward where they will have the greatest impact on student success.

Additionally, student success stories serve as the instrument for the voluntary and thoughtful adoption of innovations by others over time. Interestingly, Wenger (1998) suggests stories, examples, and long-term trajectories as facilities that support a design for learning by encouraging imagination.
The teachers at Brownlee interact with students through inquiry, modeling time and again, an iterative process during which they question and observe, record and process information, and respond - often with more questions or perhaps some discrete, just-in-time instruction. My first fifteen minutes observing in Ann's classroom provides an example of how Brownlee faculty work with the children:

Researcher Log, March 27, 2002: I walked to see Ann seated at her half circle table working one-on-one with students. Her students were spread out in the room in 1s, 2s, and 3s, reading aloud very quietly to themselves or to each other. Ann explained to me that it was Reading Workshop but, she had noticed that certain kids needed extra help with subtraction. So, while they read, she was calling students up one at a time, or a couple at a time, and working with them on their subtraction. So, I sat down as she called the name of one little girl. With the student's worksheet between them, she asked, "Can you tell me what you do to solve this problem?" The child talked through what she had done. Ann responded, as she modeled working out the problem, "Okay, in subtraction, you must do this. It's not like addition." She waited for acknowledgement from the child. Then, she added, "Here is another way to do it," as she modeled a strategy for subtracting using her hands….Next, she asked the student, "Can you do what I just showed you with this problem?" pointing out a different problem on the worksheet. The girl completed the problem successfully. Ann responded positively and asked the child to do a few more problems as she observed. Again, the child was successful. Ann then reinforced, "So, you now have a different strategy the next time we do these types of problems, subtraction."
Ann called on several strategies to inquire into and advance this child's understanding of subtraction including: think-aloud, questioning, observing, repetition, modeling, and verbalization. Ann is not alone in using inquiry with students. One day, I followed Hope into a first grade classroom to work with some of the struggling readers as the homeroom teacher worked with others. I observed Hope listen to each child read as she collected observational data on a running record. She asked questions frequently: "What do you do when you come across a difficult word?" to encourage the child to recall Reading Recovery strategies and "I love what you did there. What did you do?" to lead a child in reviewing well-used ones. Over and again, I watched Hope. Her reading instruction centers on using inquiry to identify and document reading strengths and weaknesses and to prompt students to reflect aloud on and modify their own learning behaviors. In addition to Ann and Hope, I observed Marie, Barbara, Jane, Jack, and Emma use these and other strategies as they worked with students one-on-one or in small groups.

During our interview, I asked Ann how she would describe working at Brownlee to a new faculty member. She revealed how the culture has redirected her practice toward inquiry when she replied:

It's hard work. I don't necessarily think that it's harder than at my old school. I just feel like I want to do more; because I've been given permission to and because I feel good about what I do….I might have even spent as much time on teaching but it wasn't the same kinds of things that I'm doing now. I might have spent more time cleaning up the room or making little things. I was more teacher-directed in my old school. I've learned a lot now. I'm more children-directed. I spend as much
time at school but it's more of writing up what I know about the kids, looking back on notes, "Okay, this is what this child has been doing in writing. I need to see them tomorrow during conferences," that kind of thing. I'm studying the kids more during after school time than making things that I think they can do. The estimate chart, I could have gone on the computer and made one and copied it.

But, they can get out their math journals and make it.

Not only did her second grade students construct their own data collection instruments to practice estimating and measuring but, to close the activity, students were prompted to write about their experiences with math that day in their journals. Later, Ann shows me a few of the entries and describes what each entry tells her about the student's current understanding of estimation and measurement. Further, she describes how the children use their reading, writing, and math journals as interactive learning tools with their parents. Ann learns quite a bit from parent entries as well, mostly regarding the role that they assume in their child's education. In sum, Ann demonstrates to me how, in her time at Brownlee, her work as a teacher has shifted from one of telling to one of asking. The quality of her work is now centered on inquiry about student learning.

In addition to using and modeling an inquiry-based approach in their teaching, Brownlee faculty build inquiry into student learning experiences. In discussing her teaching philosophy, Barbara shared with me a recent project with fourth grade students:

Children have to be totally engrossed in what they're doing for it to be important. For me to slap a worksheet on them, that to me is not my job. My job is that I'm a facilitator. I'm not a teacher. I'm not giving them all the information that they need to spit back to me. I am facilitating the learning goals that they have set up for
themselves. We do that often through thematic units, because we all know that
unless we link information, we only get part of it. So I have to put it towards
something, the information I'm trying to teach them, I have to link it.

In fourth grade this year...we created a crime scene. And beforehand, we
discussed with the children, "What kinds of things do you look for? What does a
good observer do?" - went through all of those problem solving skills. They had
two different days where they went in and observed the crime scene, and then
collected data for their team. They took pictures, they drew pictures, and listed
what was in the crime scene. We went on to make hypotheses. We then gave them
more information, we used forensic science where they did eight different
scientific experiments on the things that were found at the crime scene -
fingerprints, fiber evidence that they tested as cotton and wool, whether there was
something in the Coke. There was cat hair found on clothing, and they had to
determine what that was.

After all that, once again we made hypotheses, they came up with ideas
and suspects....[At] the end, we never gave them an answer. We said, "This
evidence gets taken to court, and the jury decides. And sometimes, the guilty
person gets off, or we don't really know who is guilty. We all have a hypothesis of
who we think it is, and who we think should be indicted for the crime and go to
court." So we did not give them an answer, because everything doesn't always
have an answer.

As Barbara explained the crime scene project, I flipped through the project
notebooks that the students had constructed as they worked in their teams. I saw such
artifacts as digital pictures, fingerprints, interview excerpts, and journal entries, detailing the progression of their work along with their thinking, organizational skills, presentation strategies, and more.

Similar to Barbara, Ann and the rest of the second grade faculty use inquiry to facilitate student learning about the process of writing. Rather than teach the stages of writing, they help students write in different styles - letters, poems, stories - using topics of their choosing. Then later, they use inquiry to guide the children in using their writing experiences to construct writing stages. As Ann described, "In teams, [students] came up with those ideas - What does it mean to publish? What does it mean to have a sloppy copy? They came up with those ideas and shared them with the group." By using an inquiry approach, Ann feels that her students are much more confident writers.

Although inquiry is clearly a focal point at the school, Brownlee faculty members vary in their ability to collect and use data to inform teaching and learning practices. Some staff members have developed tremendous expertise and refinement in their practices. Others are just learning how to collect, manage, and utilize data. Given that inquiry skills are rarely integral to teacher professional development experiences, especially the preservice experience, (Carr & Kemmis, 1986), this observation is not at all surprising.

In my experience, most individuals who have conducted an interview, completed an observation, or developed and analyzed the data from a survey, would agree that the collection and use of data is a time-consuming and often challenging process. Yet, as Brownlee recognizes, it is an important process if choices in teaching and learning practices are to be informed ones. Teachers, especially those unfamiliar with data
collection and use, need the knowledge and experiences to help them build competence and confidence in using inquiry skills effectively and efficiently. Further, tools that are still customized enough to be useful, yet streamlined and even standardized in some cases, would maximize the limited time to collect and analyze data.

Given their extensive experience with inquiry, Brownlee's special education faculty might serve as a very useful resource. As I observed in Jane's classroom, multiple forms of data collection, including extensive observation and interviewing, along with data storage, analysis, and use are fundamental to special education practices. As such, many inquiry practices, by now, have been refined to lessen the impact of time and resource constraints that all teachers face. Something as simple as distributing particular data collection tools strategically throughout the classroom can streamline inquiry activities. The use of paraprofessionals to collect data can ease the load of the teacher while improving accuracy and thoroughness. Of course, a bit of ingenuity must be used in order to transfer such practices to the regular classroom. Some Brownlee teachers are already doing so by employing students, parents, and other staff in the construction and use of inquiry tools. A means for regularly modeling these best practices might help more teachers to do similarly.

Helping faculty, especially newer faculty, to clarify the role of standards in their work with students might also be of benefit. As Barbara points out, feeling the stress of meeting county and state standards through high-stakes testing, it is not difficult for a teacher to fall victim to using standards in a tactical way, shifting away from inquiry and integrative approaches and toward didactic and disjointed methods:
I think one of the problems is in the conception of what teachers think about standards. And I went through that the first or second year giving the county standards to our kids….There were some people on the grade level that were very worried, "I've covered this, and I've covered [that]," and that stress spilled over to me. That had never been a way I had taught before. I started out the first half of a year trying to do it that way. "I'm going to cover this thing, and I'm going to check this off." Well, I got to December, and my kids were doing no better than they had ever done. In fact, they were doing worse than when I had used my own method of covering the standards. So I said, "Forget this. I'm going back to the way I've always done it."

I think that is [how] it's been misinterpreted. The county has not said, "You need to teach this and you can only do it this way." They just said, "The children need to know this." But because we got so uptight about "Were they going to meet the standards?" we felt we could only use one prescription.

I need to cover the [county standards] - and several standards may be covered in a unit that is integrated. Like the detectives unit, there were so many things that were covered….You have to do assessment, but it has to be a different kind of assessment. It has to be a bigger picture, instead of just working at specific skills.

Brownlee will need to help teachers counteract the external force of standards and high stakes testing that can pressure teachers into assuming more tactical roles. Faculty members like Barbara, who have developed confidence in addressing standards in a strategic, holistic manner, could help other teachers to do the same. By collaborating with
teachers in their classrooms, Barbara could introduce and model thematic units such as the crime scene project. Barbara's experience, along with that of other staff members, can be leveraged, providing important models for other teachers of how standards can be met with confidence while maintaining a practice based in inquiry.

Epilogue

In Chapter 2, I shared Senge's description of the learning organization. It bears repeating here. The learning organization is one where:

people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together (Senge, 1990, p. 3).

As demonstrated in Chapters 4 and 5, Brownlee seems to fit well the description of a learning organization, or as Wenger (1998) might call it, a learning community. Further, the dimensions of alignment, connectedness, and inquiry serve as key elements enabling them to create and recreate the school that they set out to be. Brownlee is aligned as a community in terms of "the results they truly desire," student success. By valuing inquiry, in word and deed, staff and students have the means for pursuing "new and expansive patterns" for teaching and learning. Finally, it is their deep and enduring connectedness that ensures the pursuit of student success through inquiry "together" as a community, to pursue learning as a decidedly social phenomenon.
Chapter Six
Discussion

When learning comes to focus, the learner becomes the key entity of the system, and the primary task is to provide resources, arrangements, and opportunities for learning. A learning focus requires the design of a new system (Banathy, 1995, p. 15).

The purpose of this study was to explore the dimensions that foster and sustain teachers as innovators and schools as innovative places for improved teaching and learning by studying an exemplary League school known for its innovative practices in teaching and learning. In Chapter 4, I provided a portrait of Brownlee; the nature of this school community and how its members "do school." In Chapter 5, I presented the three dimensions (alignment, connectedness, and inquiry) that enable the school community to be what it desires to be while continuing to renew itself. In this final chapter, I provide a brief summation of the study. Next, I offer the major conclusions arising from this research and the recommendations these conclusions, considered in the light of other research literature, suggest for future practice and research. Further, I share thoughts regarding potential implications of this study for Brownlee and the League of Professional Schools. I end with some personal reflections about the impact of this study on my research and practice.
Summation of Study

The purpose of this study was to explore the dimensions that foster and sustain teachers as innovators and schools as innovative places for improved teaching and learning by studying an exemplary League school known for its innovative practices in teaching and learning. The purpose was pursued through one main research question and two sub-questions. The overarching research question was: How does one school known for its innovative practices in teaching and learning foster and sustain community members as innovators for improved teaching and learning? This main question was mediated by two sub-questions: Who is this school community of innovators in teaching and learning practices and how do they "do school?" and What are the major dimensions that enable such a school community of innovators in teaching and learning practices to create and renew itself?

The research design was an ethnographic, single, embedded case study. The research site was Brownlee Elementary, a League of Professional Schools member school known for its focus on student learning and its innovative practices in teaching and learning. Participants included nine individuals, six teachers and three administrators. The six teachers were identified as innovative practitioners of teaching and learning both in the classroom and the school by the staff at Brownlee through an anonymous survey. Data collection methods included individual and focus group interviews, observation, document analysis, and researcher self-interviews. Data were analyzed using the constant comparative method, an iterative process over 13 weeks during which data were collected, reviewed and coded for themes, and reflected back, in the form of raw data
and/or report drafts, to study participants, peer reviewers, and several supervisors of this research.

The first set of findings address the research sub-question, Who is the school community known as Brownlee Elementary and how do they "do school?" Brownlee is a continuously self-renewing community that employs a covenant of teaching and learning, a shared decision-making model, and a critical study process to pursue its central enterprise, student success in learning. Further, Brownlee is a school community that purposefully designed itself for learning by answering, as a community, five guiding questions:

- Who are we?
- What do we stand for?
- Where do we focus our time, energy, and resources?
- How do we organize ourselves?
- When will we do things? (Brownlee Behind the Music Discussion Guide)

Finally, Brownlee continuously redesigns itself by revisiting, as a community, core defining elements, such as its covenant and content philosophies, in light of the guiding questions that first facilitated its formation.

The second set of findings address the research sub-question, What are the major dimensions that enable such a school community as Brownlee Elementary to be and renew itself? Alignment, connectedness, and inquiry were identified from the data analysis as the three key dimensions that enable Brownlee to create and recreate the school that the community set out to be. Alignment means that Brownlee community
members are side by side in agreement in terms of the outcomes they are seeking, student success in reading, writing, and math through active and engaged learning. Inquiry, in word and deed, provides the means for staff and students to enact new and imaginative approaches for teaching and learning. Connectedness ensures the pursuit of student success through inquiry together as a community through public discourse and practice.

Conclusions and Recommendations for Research and Practice

Speaking from my position as researcher, three important conclusions arise out of this research. My first conclusion is that innovation in teaching and learning practices can originate, in a generative fashion, through diagnosing and meeting individual student learning needs, and indeed, this may be the preferred path to innovation. The second conclusion is that teacher expertise is essential to realizing improvement in practices that foster student success, meaning progress in achieving individual learning goals. The third conclusion is that Brownlee is an alternative, exemplary model for fostering student learning and, by requirement, teacher expertise, and therefore, it (and similar models when they are found) should be communicated to those assuming responsibility for student success - teachers, administrators, "teacher educators," politicians, and the like – so that these same people can see their way clear to other possibilities for public schooling in the United States.

Innovation for Student Success through Inquiry

The first conclusion arising out of this research study is that innovation in teaching and learning practices can originate, in a generative fashion, through diagnosing and meeting individual student learning needs, and indeed, this may be the preferred path to innovation. (Just as importantly, it should be stated, that a path that is much less likely
to lead to success is one wherein the innovation is too focused on the *means* of the innovation rather than the *ends.* Further, individual student learning needs are known through continuous inquiry; that is, by knowing students well through the local and customized collection, analysis, and use of data to plan for learning that draws on experience, expertise, and/or innovation, as needed.

As demonstrated previously, Brownlee faculty have criteria by which they measure a student's progress in learning goals. For example, writing stages 1-6 serve as criteria for measuring a student's success in writing. Further, staff members collect data with a useful measure of rigor to determine a student's current state of success. In writing, agreed-upon rubrics provide a tool for consistently assessing a student's writing stage across faculty members. Additionally, Brownlee faculty have shared goals that provide a vision for the desired state of a student. For example, a fifth grade student is expected to write at a stage 4 or above, a standard higher than the county standard.

Interestingly, in the language of an instructional technologist, Brownlee faculty essentially use a needs assessment approach for identifying gaps in student performance. A needs assessment is a process for determining the gap between the current state of performance and the desired state of performance (Kaufman, Rojas, & Hanna, 1993; Rossett, 1987). Further, identified gaps in student performance serve as the impetus for introducing teaching and learning innovations that, it is suspected through professional judgment, will mediate gaps. Characteristically, the assessment process is ongoing and innovations are adapted over time to better fit the learning needs.

For example, having defined goals, criteria, and assessment processes for student success in writing, Brownlee introduced a set of writing strategies to support student use
of best practices in writing, such as buddy conferencing. From her experience with a staff book study, Ann and another colleague in second grade integrated the Writing Wheel as an interactive tool for students to practice the regular use of these strategies as independent writers. Later, dissatisfied with writing data from the prior school year, the second grade faculty reconfigured the learning of these strategies as a discovery process during which students collaborated on creating the meaning of each strategy out of their own writing experiences.

Again, Brownlee's locally developed process, having elements of analysis, design, development, implementation, and evaluation, is reminiscent of what an instructional technologist knows to be an instructional systems design (ISD) model (Dick & Carey, 1996; Gustafson & Branch, 1997). Although a worthwhile comparison, I draw it with a bit of trepidation for my implication is not that teachers must learn and implement an ISD model in order to pursue student success in learning. As it has been argued elsewhere, the sterility of certain Instructional Technology principles, including ISD models, calls into question their usefulness for practitioners (Reeves, 2000). Further, the Brownlee story itself refutes such a suggestion.

Rather, the implication of note is an opportunity for the instructional technologist to study and learn from an example, in Brownlee, of how K-12 practitioners have made useful certain instructional design principles and processes, even if not so named. Indeed, further research with teachers in schools such as Brownlee may explicate which principles are useful and what form they must take in order to retain their usefulness. This recommendation supports the argument put forward by Reeves (2000) for the Instructional Technology professional community to shift research practice from a
positivist epistemology, in which decontextualized theories and principles are passed down to practitioners, to a pragmatic one, in which ideas for practice are constructed collaboratively by practitioners and researchers.

More simply put, I am recommending that the Instructional Technologist get back in the ocean and swim side-by-side with practitioners; that we learn with, from, and about school communities such as Brownlee in the same way that Brownlee teachers learn with, from, and about one another and their students. In fact, with a language for learning, the Instructional Technologist might be uniquely poised to do just this. With learning as our subject matter (rather than math or reading or writing), we may be inclined to recognize and articulate it when we see it. In fact, we may be positioned to do even more - by attending to a line of research and practice that addresses process innovation; that is, how to design for process. We may even have an approach in the form of development research, in which researchers and practitioners analyze, develop, and evaluate interventions to meet real-world needs and produce design principles that facilitate this work in the future (Reeves, 2000); much like Brownlee renews itself by revisiting and refining its design for learning.

Of course, these possibilities assume that we, as a professional community, honor all of the components that make up a commonly held definition of our field; instructional technology as “the theory and practice of design, development, utilization, management and evaluation of processes and resources for learning” (Seels & Richey, 1994, p. 9). As Brownlee often asks of itself, "Is this still what we believe? Is it still what we are about?" If not, learning again from the example of Brownlee, perhaps we might co-construct a
definition and name for the field that means something to users of instructional technology, professionals and "amateurs" alike.

Expertise as Inquiry

The second conclusion arising from this study is that teacher expertise is essential to realizing the type of innovation in schools that fosters student success; that is, progress in achieving individual learning goals. What, however, is meant by expertise? In reviewing the literature on the nature and development of expertise, Pierson (2001) asserts, "Experts are distinguished by a lifelong pursuit of complex problems for the purpose of enhancing personal learning" (p. 413).

Pierson's study is quite different from this research in that it focuses on how to achieve technology integration. Her methods are commendable in that she examines the question by working with teachers. One of her resulting arguments is that true technology integration requires the intersection of technical, pedagogical, and content knowledge (Pierson, 2001). Although her study is useful in that it examines teacher expertise systemically, her conclusion still advocates what was characterized in Chapter 2 as a technical approach to teacher professional development and practice.

I agree with Pierson that teacher expertise requires an intersection of critical knowledge areas. I also agree that teachers must develop ongoing expertise in content areas. In the five years that Brownlee has focused on reading, faculty have acquired an impressive depth of knowledge about what effective reading looks like and how students become effective readers. However, like Papert (1993), I believe we need to shift away from promoting the acquisition of the kinds of pedagogical knowledge that tends to mechanize learning as something a teacher causes to happen through transmission.
Instead of learning about the science or even "the art of teaching," perhaps teachers would be better served engaging with subject matter in the "art of learning" or as Papert terms it, mathetics (Papert, 1993). This argument is not one of mere semantics. Rather, again, it implies a shift in epistemologies from a positivist view of teacher as transmitter of knowledge and skills to a view of teacher as facilitator of learning and designer of successful learning environments.

Through a shared, professional practice that values lifelong learning and centers on inquiry into student learning, the faculty at Brownlee have embraced a way of "doing school" that continually develops their expertise as educators. As they describe so well themselves, their learning is never completed. Through the continuous and up close study of their students, new challenges arise that stir them to know and do, more and differently. An educator then, whether teacher or administrator, must be conceived of first as a learner who engages with complex problems for the life span. This notion of an educator as expert learner aligns with Wenger's conception of education and identity formation. As the author (1998) asserts, his discussion of education:

assumes neither that education takes place in schools as we know them nor that education is for children. In fact, once education is understood in terms of identity, it may no longer seem such a good idea to front-load "education" at the beginning of a life. Identity formation is a lifelong process whose phases and rhythms change as the world changes. From this perspective, we need to think about education not merely in terms of an initial period of socialization into a culture, but more fundamentally in terms of rhythms by which communities and individuals continually renew themselves. Education thus becomes a mutual
developmental process….It is an investment of a community in its own future (p. 263).

Here, Wenger is discussing a fundamental shift from this country's deeply embedded history of understanding education as socialization or cultural transmission (Bourdieu, 1973; Bowles, 1977; Feinberg & Soltis, 1998) to a conceptualization of education as lifelong identity formation within the context of a community. Further, the implication is not so much that we ask ourselves how does one get educators to make such a shift? Rather, the implication (and the opportunity) is to pick up our heads and, as we look around, ask: Who is already doing it and what can we learn from them?

Brownlee's model of teacher professional development and practice as "expertise through inquiry" stands as an example of what was characterized in Chapter 2 as a strategic approach to teacher education - and not just the education that occurs in universities but, more broadly, lifelong education as described by Wenger. The strategic teacher, if you recall,

submits some part of his or her work to systematic examination….he or she plans thoughtfully, acts deliberately, observes the consequences of action systematically, and reflects critically on the situational constraints and practical potential of the strategic action being considered. He or she will also construct opportunities to carry this private discourse into discussion and debate with others – teachers, students, administrators and the school community. In so doing, he or she helps to establish critical communities of enquirers into teaching, the curriculum and school organization, and administration with groups within the school, the whole school or between schools (Carr & Kemmis, 1986, p. 40).
Just as Brownlee presents in itself an example of teacher professional practice as inquiry, so too are there examples of preservice education as inquiry (Valli, 1992). For instance, the teacher education programs at Kent State (Kent State University overview of conceptual framework, 2000), the University of New Hampshire (University of New Hampshire, education department, n.d.), and the University of Missouri (University of Missouri teacher education program, n.d.) all value inquiry as a community as a core strategy for learning, as demonstrated by their mission statements, programmatic design, and practices. My recommendation is that we study these and other examples for what they have to teach us.

As presented in Chapter 2, findings in the educational innovation research literature name the teacher as the local and immediate agent for changing teaching and learning practices and identify teacher professional development and practice as the lynchpin for realizing impactful innovation in schools. As Brownlee demonstrates, an inquiry approach to teacher professional development and practice demonstrates promise for nurturing innovation as a matter of course. An inquiry design creates space for the local educational community to design and redesign learner-centered environments that call on innovation to meet student needs. The standards for "what to learn" at the K-12 level indeed may best be a collaboration between local and larger entities. However, the "how to learn" must be owned by the members of the local learning community.

As one might surmise, the pursuit of professional expertise as inquiry also holds implications for the recruitment of education students and the hiring of teacher candidates. First, College of Education communities must set the expectation of what it means to be a teacher just as Brownlee has set a clear expectation of what it means to be
a learner. To my surprise, in my experience with preservice teachers over the last four years, I have discovered that quite a few students "chose" the profession for reasons that may disappoint. In asking students their reasons for pursuing teaching as a career, they have shared with me such responses as: "I'll get my summers off," It will be easier to raise a family," or even, "I'm not smart enough for the business school." Admittedly, my experience is purely anecdotal. It is not empirical research. However, when Emma shared with me that some of her interviewees still offer "summers off" as a rationale for pursuing teaching, I cannot help but speculate if we need to do a better job in higher education of communicating expectations and real-world experience.

Accessibility Of Alternative Exemplary Models That Support Innovation

The third conclusion from this research is that alternative, exemplary models for fostering student learning and, by requirement, teacher expertise and innovation in learning, do exist. Brownlee is one school community that serves as evidence of that. My guess is that there are others. Further, the nature of these best practice models should be communicated to those assuming responsibility for student success - teachers, administrators, "teacher educators," politicians, and the like.

Reflecting a bit, by beginning with the assessment of individual learning needs, rather than norm-referenced test results or, even worse, a mandated innovation, Brownlee faculty avoid some of the common pitfalls of educational innovation, as discussed in Chapters 1 and 2. First, the faculty's extensive use of inquiry makes it difficult not to innovate and therefore, heads off the stagnation that often comes with teaching and learning in highly prescribed and technical ways (Carr & Kemmis, 1986; Fullan, 1993a). As Jack explains, a bit ironically:
The more you know the kids, the more you know you need to do. That is the thing that challenges [us] the most. And, we have talked about that - our strength is also our weakness; because there are just too many things that we want to do. You [will] hear people saying, "I know I could do this. How can you help me do this?"

Secondly, Brownlee staff reduce the costs, financially and otherwise, of misappropriated innovation that can arise out of norm-referenced test data which provides insufficient or misleading information about student learning (Stiggins, 2002). Diane Shephard spoke to the value of redirecting efforts toward local and customized assessment. Stiggins (2002) speaks to it as well when he asserts,

Student achievement suffers because once-a-year, [standardized] tests are incapable of providing teachers with the moment-to-moment and day-to-day information about student achievement that they need to make crucial instructional decisions. Teacher must rely on classroom assessment to do this (p. 201).

Brownlee has already taken a stand on this issue by insisting that inquiry into student learning is the key to student success. Further, they have demonstrated that, despite externally-imposed educational innovation initiatives that continue to "do more of the same," it is possible to enact a different way.

A remarkable example comes in Brownlee's recent decision to forego the county's new math curriculum. After participating in county-wide pilots over the last several years, Brownlee discovered, through their own in-house assessment data, that one of the pilot curriculums did result in improved student learning. Further, this curriculum aligned well with the school community's covenant for active student learning. Unfortunately, the
county felt that teachers were not ready to take on such a significantly different
curriculum and, therefore, chose one of the other, more traditional, pilot programs for
implementation. Brownlee refuses to ignore their assessment data and, therefore, is
purchasing the pilot curriculum that demonstrated student success. They begin phasing it
in during the 2002-03 school year. As Emma puts it,

I have used what the county has provided us for four years and our math scores
are not great. I can't keep doing the same thing harder and expect any difference.
So we are going to purchase locally….We will still teach the county [standards]
but we are not going to use the same materials. This is going to require local
resources. But [when] the faculty looks at it and tries to make decisions on what
we need to do better, using the data clearly says we need to be doing something
different. I talked to [my supervisor] about that yesterday. I said, "The county [is
going] back to the two most traditional math programs. And we are not going to
do that."…The faculty is very committed to that.

Brownlee's experience with the county's pilot process and adoption decision and
their ultimate determination to take a different path reflects the position put forth by
Wenger on the nature of the relationship between a community of practice and external
forces:

Saying that communities of practice produce their practice is not saying that they
cannot be influenced, manipulated, duped, intimidated, exploited, debilitated,
misled, or coerced into submission; nor is it saying that they cannot be inspired,
helped, supported, enlightened, unshackled, or empowered. But it is saying that
the power - benevolent or malevolent - that institutions, prescriptions, or
individuals have over the practice of a community is always mediated by the community's productions of its practice. External forces have no direct power over this production because, in the last analysis (i.e., in the doing through mutual engagement in practice), it is the community that negotiates its enterprise (p. 80).

I first read this passage prior to beginning my research with Brownlee. At that time, I penned a note in the margin, "not sure I agree but, an empowering thought." Having since experienced Brownlee, I will need to amend that notation; for I have seen for myself what one school community can be regardless of the powers that be.

Finally, Brownlee faculty shift away from innovation for its own sake and, in the process, lessen the demoralization that comes with the repeated failures so characteristic of this country's educational change track record (Fullan & Stiegelbauer, 1991; Means, 1994). Beyond student learning, which again must come first, the most promising implication of Brownlee's focus on student success through inquiry is a model for practitioners that invites impactful innovation into the school and the classroom. This alternative way of doing things, this difference that is Brownlee, should be communicated to practitioners, researchers, and policy makers. As Emma encapsulated it for me during a hallway conversation, if they do not experience a different way, how do they even know it exists? How do they know that it is possible?

Fortunately, some practitioners and researchers are beginning to experience the difference that is Brownlee. Brownlee routinely welcomes visiting principals and teachers into the school to observe and discuss how they "do school." As a demonstration school for the League of Professional Schools, they have hosted a number of League schools over the last year and, most recently, gladly received principals in town for the
International Principals Consortium. Emma Adams sees value in welcoming and dialoguing with such visitors because, as she explained, it gives them an opportunity to see and discuss an alternative way of doing things. Emma feels that schools cannot be expected to do things differently if they are not even aware of alternatives - if they've never seen other possibilities in practice. Thus, a useful first step is simply helping educators, and other stakeholders, to build an awareness of other options.

Another way that Brownlee will build awareness is through its goal of capturing the school's story in a book. In fact, Brownlee is already on its way in telling one piece of the story by securing a grant from the Spencer Foundation to support its efforts to reflect on and document its goals, practices, and outcomes in writing. As I told Brownlee faculty members, my hope is that their participation in this study and reading of my "tiny tale," will advance them in their book-writing efforts. True to form, when I asked study participants to anonymously write down one thing that I could do to help make theirs an enjoyable and rewarding research experience, most of them told me "Tell us what you find out."

There are other schools such as Brownlee - schools known, at least locally, for their focus on student success in learning and innovative learning practices. Taking a cue from Brownlee, my recommendation is that we, researchers and practitioners, seek out these schools and, through research, strive to help them tell their stories so that more people can experience another possibility.

_Potential Implications for Brownlee and the League of Professional Schools_

In five years, Brownlee has come a long way in building the community of learners that they set out to be. My hope for them is to realize even more success with
their vision of student success in learning. Further, although I believe that Brownlee should retain its model of learning through active and shared inquiry, perhaps it is also time for the school community to now name and describe some of their more mature processes - for assessing student needs, for identifying potentially useful innovations, and so forth. This suggestion points to what Wenger (1998) describes as the necessary duality of participation and reification in negotiating meaning in a community of practice. Through reification of certain refined processes, Brownlee may discover some possibilities for expediting the understanding and use of these processes, especially among newer faculty members, and thus provide a healthy counterbalance to its highly participatory culture. I name this a potential implication because Brownlee is the appropriate party for determining the value of this suggestion and if and when they might pursue it.

As a part-time graduate assistant in the League of Professional Schools over the last two years, I am aware that the League leadership has wrestled with the future role it should play in helping League schools to achieve their goals. Through this study, it occurred to me that the League might benefit from a strategy that the Brownlee school community uses. In asking study participants how they meet new school-wide challenges such as their growing ESOL population, several staff members explained to me that they typically begin by inviting anyone who is interested in discussing the issue to a meeting. (By using invitation, Brownlee makes the point that such a meeting usually draws community members who are the most impacted by or have expertise in the problem area and therefore, are motivated.) In this meeting, participants often try to identify exemplars as resources.
For example, as part of a recent ESOL meeting, the group asked such questions as: What schools do we know of that already have a large ESOL population? What have they done to date? What has been successful? Who will contact them to obtain information, materials, and so forth? In essence, they study the exemplars, they study themselves, and then, they identify the gap between the two. The gap determines the direction that they will take in meeting the specific needs of their learning community.

The League has exemplars to study, one being Brownlee. They also know of schools that have struggled to enact the League framework so that it improves student learning in meaningful and sustaining ways. By studying collaboratively with both types of schools, the League might identify some gaps that, if attended to, could help struggling schools positively influence student learning. Perhaps such inquiry would even lead to an amended or expanded League framework for school renewal. Now, as mentioned previously, the League has recently decided to narrow its focus and concentrate on helping schools implement service learning. Thus again, the League must be the party to determine if this potential implication is appropriate or even, possible as it pursues its future.

Reflections on Personal Meaning

Earlier in this chapter, I quoted Jack Hoover describing how inquiry is both Brownlee's strength and its weakness. As I conclude this final chapter, I feel the weight of his statement. In some respects, the most important lesson that I have learned as a result of this research is that I have only seen the tip of the iceberg. As much as I have discovered and come to understand about Brownlee, I realize how much I still do not know - and the new questions that I have. As a researcher, this realization is both inviting
and disconcerting. It is inviting because it opens the door to future directions for my research. For example, my hope is to find more schools like Brownlee in that they demonstrate a commitment to and success with meeting individual student learning needs. My goal is to partner with these schools in collaborative research efforts much like this one. Brownlee is one example. Surely, there are others who have stories from which both researchers and practitioners might benefit.

My "tip of the iceberg" realization is disconcerting in that a reader of this document is free to interpret my writing as prescription. Yet, as I assured my participants repeatedly and now say to the reader, the overriding purpose of this study was not prescriptive but rather descriptive. Human nature as it is, I understand the drive to want to learn, to want to understand, and to want to make meaning and usefulness. Perhaps this is why Wolcott (1990) makes the point that the distinction between descriptive and prescriptive research reports is often a difficult one to make. It is factual that, through my writing, I say quite a bit about Brownlee. However, what I am not saying is that the Brownlee way of "doing school" is the only way or even, the best way. Further, I am not advocating that those concerned with improving student learning attempt to "box Brownlee up and unpack it elsewhere," as if we even could. Thus, maybe the greatest value in this research project and others like it is simply in the attempt to understand and share what was learned, however incomplete and imperfect. As one participant and one committee member have said to me, there is usefulness in just telling the story.

As a practitioner, I can only begin to conjecture all that I have gained from my experience with Brownlee. The school's brain-based learning practices helped me to understand, respect, and reify some of my own longstanding learning practices - the
penchant for soft, desktop lighting and quiet music in the background - that I just
assumed were idiosyncratic and hardly gave a thought. In a larger way, the curiosity,
imagination, and energy with which the Brownlee faculty approached their daily practice
have been restorative. I recall the staleness that I felt teaching my last section of EDIT
2000, an introductory Instructional Technology course for preservice teachers, during the
Spring of 2001. Working with Brownlee, I feel renewed. I imagine that, when I return to
teaching in the Fall, I will be more of the teacher that I was, more of the teacher that I
wish to be - a better teacher. And, when I or a student is having "one of those days," I
now have more ideas from which to draw to revitalize learning.

Even more importantly, my time with Brownlee has caused me to release some
skepticism that, over the years, quieted the passion of my 16-year old self; that teenager
who somehow convinced her history teacher to let her write a paper on experimental
education - simply because she was searching for another way. Funny how, only 22 years
later, Brownlee gave me the opportunity to experience another way. That is how learning
is, I suppose - complex, lifelong, and full of twists and turns where you cannot really
predict when and how the "big lessons" will come. Perhaps this is what Wenger (1998)
means when he states that "learning cannot be designed" (or mandated or packaged) but,
that it can be "designed for" (facilitated, encouraged, and supported). My experience with
Brownlee supported my learning in that it provided me with some essential "ah-ha’s;"
those moments of "Oh, that’s what Wenger was describing on p 34!" It situated his ideas,
which are at times, difficult to hold on to, within a context where I could make meaning
and usefulness that I now carry forward with me.
On my last day with Brownlee, I stopped by Emma's office to thank her for saying "yes." I told her that I had learned so much from my time with Brownlee and that, in five years, I was convinced that I would still be learning from the experience. Emma was happy to hear this and then, in her quintessential way, said to me, "Well, come on back and study us anytime." One never knows; maybe, I will.

Researcher Log, June 13, 2002: Circumstances being what they are, not much time has passed between my writing of Chapters 4 and 5 and the writing of Chapter 6. As I struggle more than usual to complete this final chapter, it occurs to me this morning that I have been swimming in the ocean with Brownlee for such a while now that it is difficult to break away from the school, to head for the beach, so that I may stand on the shore, separate, but not too far away, from the school in the ocean - so that I may see it once again as a whole, in its entirety.

At the risk of not sounding very scholarly, swimming with Brownlee has been fun. My journey was indeed an adventure. Sometimes I was right in the thick of it - swimming in the middle of that school of bluefish, feeling their energy just sweep me along. Sometimes I was lagging behind just trying to keep my eye on the fish directly ahead of me, maybe even draft a little in their wake, until I regained the energy to pick up my pace. Sometimes, I drifted away from the school to find a different source of nourishment - a book, a peer, a coach - that I needed in order to continue. Today, I find myself struggling to flop myself up on that beach. I feel the discomfort like a fish out of water. I suspect this feeling will dissipate on its own with time and distance. And fortunately, the ocean, with all of
its richness and complexity, will be there when I am able to jump back in the water and swim with a school again.
References


_Chen, A. (1994).*_


Appendices
A: Preliminary Framework of Factors Sustaining Innovation

(Understanding of and participation in organizational factors are assumed at the cohort and individual levels. Understanding of and participation in cohort factors are assumed at the individual level.)
B: Review Checklist

In addition to commenting freely throughout your copy of the draft report, you may want to use the following checklist to assess the report along the listed criteria.

<table>
<thead>
<tr>
<th>Review Criteria</th>
<th>Degree to Which Criterion is Met (check one column)</th>
<th>Comments (supporting evidence, suggested improvements, relevant page numbers, etc.)</th>
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<td>To what degree does the report:</td>
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<td>1. use language that feels familiar to you as a K-12 educator?</td>
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<td>2. provide substantial raw data prior to offering interpretations?</td>
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<td>4. include useful information about the researcher, including biases?</td>
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C: Survey to School Staff to Identify Study Participants

Hello!

I am writing to ask your school staff to participate in my dissertation research study. The purpose of my study is to explore how teachers are able to sustain themselves as innovators of improved teaching and learning practices.

Time constraints prevent me from being able to work with every staff member in the school. But, since you know one another best, I am asking for your help in identifying five teachers in the school who you feel are:

- innovators when it comes to teaching and learning practices. These are colleagues in your school who you feel actively work to introduce sound, diverse, even novel teaching and learning practices into their classrooms.
- active and positive agents for change school-wide. These are colleagues in your school who you feel actively work to share their best teaching and learning practices with fellow staff members and encourage others to be innovators in their classrooms as well.

As the researcher for this study, I will be the only person to have access to your individual input. I will keep your responses confidential and use them solely to identify, through school-wide consensus, a small group of innovative teachers in your school who will then be asked to voluntarily participate in the study.

Now that you have had a moment to think about it, please print the names and grade levels of the five teachers who you feel are the most innovative in teaching and learning practices – both in their classrooms and school-wide:

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<th>Teacher Name</th>
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Thank you for your input! I look forward to the opportunity to work with your school, getting to know you and the innovative practices you are pursuing.

Jennifer M. Brill
Researcher and Doctoral Candidate
University of Georgia
D: Invitation to Participate and Informed Consent

Hello!

The purpose of this letter is to invite you to participate in a research study. The goal of this study is to explore the factors that support and sustain teachers as innovators for improved teaching and learning. Findings from this research will provide direction for improving teaching and learning in the classroom by focusing on the individuals central to educational innovation - teachers. The study will identify individual traits, professional activities, and organizational aspects that support teachers as they bring new practices to teaching and learning. Participation in this research will not only provide new insights but also give you an opportunity to reflect on your experiences as an educator, helping you to identify individual and environmental aspects which most support you as an innovator in teaching and learning.

PROCEDURES
Your participation in this research will require you to complete the following steps over the next 8-10 weeks:

1. Consent to participate by reading and responding in writing to this letter, as directed by the researcher. (approximately 15 minutes)
2. Participate in an audio-taped focus group interview with six of your colleagues. (approximately 3 hours)
3. Participate in two audio-taped individual interviews. (maximum of 1 hour each)
4. Allow the researcher to shadow you as you progress through your typical work day. (for a maximum of two, nonconsecutive work days)
5. Allow the researcher to sit in on a number of staff meetings. (as recommended by and previously agreed to by participants over the course of the study)

CONFIDENTIALITY
Your participation in this study will be confidential. Only the researcher will have access to participant data. Only the researcher will be able to identify a specific participant's data. All interview audio tapes will be kept in a secured location by the researcher for the duration of the study, after which the tapes will be erased. The researcher will ask each participant to select a pseudonym that will be used for the storage, analysis, and reporting of data and findings. Participant names will not be used in any reportings on this research. A copy of the final research report will be provided to the school principal and the county research committee director.

PARTICIPANT RIGHTS
Your participation in this study is voluntary; you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at anytime without penalty and without loss of benefits to which you are otherwise entitled.

If you feel you have not been treated according to the description in this letter, or your rights as a participant in research have been violated during the course of this project, you
may contact Chris A. Joseph, Ph.D., Institutional Review Board/Human Subjects Office, 606A Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-6514 E-Mail Address IRB@uga.edu.

CONTACT INFORMATION
If you have questions at any time about the study or the procedures, you may contact the researcher:

Jennifer M. Brill, Researcher
Instructional Technology Department
College of Education, University of Georgia
626D Aderhold Hall, Athens, GA 30602
Phone: (706) 227-0937
Email: jbrill@coe.uga.edu

Dr. Thomas Reeves, Advisor
Instructional Technology Department
College of Educ, University of Georgia
630C Aderhold Hall, Athens, GA 30602
Phone: (706) 542-3849
Email: treeves@coe.uga.edu

PROVIDING CONSENT:
If you agree to participate in this study, please indicate your consent by completing the following four items:

My signature below indicates that the researcher has answered all of my questions to my satisfaction and that I consent to volunteer for this study. I have been given a copy of this form.

Name (please print): _______________________________________

Contact Information (email or phone): ________________________

Signature: _______________________________________________

Date: ___________________________________________________

Please sign both copies of this form. Keep one and return the other to the researcher.

Thank you, in advance, for considering this study. I hope that you will agree to participate!

Best Regards,

Jennifer M. Brill
Researcher
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<td>Observation of Staff Development Day</td>
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<td>Focus Group 1</td>
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<td>Focus Group 2</td>
<td>Observation 2 with Claire Todd</td>
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<td>Observation of End of Year Data Discussion and Celebration Day</td>
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*Certain research activities were ongoing throughout this time period including:

- member checking
- interview transcription
- collection and review of documents
- researcher log entries
- field notes
- data analysis
- report writing
F: Interview Protocol

Opening Statement: (paraphrase)

The purpose of this study is to explore the dimensions that foster and sustain teachers as innovators and schools as innovative places for improved teaching and learning by working with you, an exemplary League school known for its innovative practices in teaching and learning.

So, my overarching question is: How does one school known for its innovative practices in teaching and learning foster and sustain community members as innovators for improved teaching and learning?

First about that word "innovator" (because it can make people nervous), by innovator, I mean a teacher who brings new practices grounded in respected educational theory that push beyond the traditional approach to teaching where teachers are the sole experts and authorities and students are passive recipients of knowledge. Does that make sense?

Little research has been done about teachers as innovators (versus innovations themselves). Yet, most understand that teachers are central to innovation in teaching and learning practices in schools. The purpose of this study is to explore the dimensions that foster and sustain teachers as innovators and schools as innovative places for improved teaching and learning in an elementary school.

Research Questions:

The purpose of this study was pursued through one main research question and two sub-questions. The overarching research question was: How does one school known for its innovative practices in teaching and learning foster and sustain community members as innovators for improved teaching and learning? This main question was mediated by two sub-questions: Who is this school community of innovators in teaching and learning practices and how do they "do school?" and What are the major dimensions that enable such a school community of innovators in teaching and learning practices to create and renew itself?
Interview Questions by Category

Introductory/Warm-Up Material

- Please state your name, age, years as a teacher, time and position here at the school.
- Choose a pseudonym.
- Describe how you know Brownlee.
- Describe how you know your class (#, gender, race, ESOL, etc.)

Teaching and Learning Innovation(s)

- Can you describe some of the new and different things (innovations in teaching and learning) that you have observed or participated in here at the school that you felt improved teaching and learning?
  - How did it go?
  - What was the nature of your involvement? Others’ involvement?
- Can you describe a current innovation in teaching and learning that you are participating in here at the school?
  - How is it going?
  - What is the nature of your involvement? Others’ involvement?
- What “innovator traits” are you calling on to enact the innovation?

The Individual

- How do you describe your philosophy of teaching and learning? School? Schooling?
- How do you describe the professional preparation you have completed to date?
- How do you describe your philosophy of leadership?

- What traits do you think others see in you that cause them to consider you an innovator?
- What do you describe as the key traits or characteristics of an innovator?
- Do you consider yourself an innovator when it comes to your work?
- What traits (knowledge/skills/beliefs) do you see in yourself that cause you to consider yourself an innovator?
- Where do these traits come from?
  - Where you born with them?
  - Were they developed by certain experiences? Which ones?
- How do you sustain, or even nurture, these traits in environments or with people who seem to squelch innovation?
• How does your role as innovator manifest itself in your professional practice here at the school? In the classroom? In your various cohort groups?
• What are the personal challenges to innovation?

The Cohort

• What cohort groups (collaborative projects) do you participate in here at the school?
• How do these groups operate?
• What is the role of each of these groups?
• What role do you play in each group?
• What “innovator traits” do you call on while participating in each group?
• How does each group sustain you, or even nurture you, as an educational innovator?
• If one of the groups were to go away, how would it impact your ability to innovate?
• What are the group challenges to innovation?

The Organization

• How is this school organized?
• How is this school governed?
• Does the school have a mission? If so, what is it? Does it change?
• Describe the administration here. Their roles? Their leadership style?
• What are the key activities that occur here at the organizational, or school, level?
• What is the role of each of these activities?
• How do you participate in any of these activities? What is your role?
• What innovator traits do you call on while participating in each activity?
• How do these activities sustain you, or even nurture you, as an educational innovator?
• If one of these activities were to go away, how would it impact your ability to innovate?
• What are the organizational challenges to innovation?

The League of Professional Schools

• How does your identity as a League school impact your ability to innovate?
• What aspects of being a League school most impact your ability to innovate?
• What about the League do you like? Do you not like? What's missing?

Other

• What else do I need to know when it comes to this school’s ability to sustain and nurture teaching and learning innovation? What contributes? What challenges?
G: Focus Group Protocol

1) Welcome and Introductions:
   a) Welcome participants to session and thank them for coming.
   b) Introduce self.
   c) Provide background of research project and complete informed consent process.
   d) Share purpose of focus group session.
      i) The purpose of the session is to share some of their “good work” – some of the teaching and learning innovations that they have brought about at the school - and talk about the elements that they feel enable them to be successful innovators.
      ii) In addition to the focus session, they will each be interviewed individually.
   e) Explain format and timing of session.
   f) Encourage frank and open discussion. Remind them of confidentiality of responses.
   g) Review the “rules of brainstorming” – e.g. all responses are valued, no critique, etc.
   h) There are no “right answers” just your thoughts and experiences.
   i) They will be using post-it notes, markers, flip chart paper, and colored dots to:
      i) Capture every person’s input in their own words.
      ii) Group the input to highlight trends and patterns.
   j) They will be participating in a process where they:
      i) Describe some recent teaching and learning innovations at the school.
      ii) Describe the elements that enabled them to innovate successfully.
      iii) Sort the elements into categories.
      iv) Prioritize the elements in each category in importance.
      v) Provide some final words of wisdom.
   k) Review ground rules:
      i) Use tools provided.
      ii) Print in large block letters.
      iii) Be concise.
      iv) Capture one idea per post-it note.
   l) Field questions.
m) Have participants introduce themselves and share one positive/funny thing they are known for among their colleagues.

2) Icebreaker and Orientation: Tell me about some of the great things you have been doing here at the school. When you think about the changes in teaching and learning practices that you’ve made at the school, what really worked? What got you excited?

a) List one innovation per post-it until out of ideas.

b) Have participants take turns describing and posting their innovations on blank flip chart paper labeled “What We’ve Done!”
   i) Include duplicate items.
   ii) This information will be used in the next step, so listen closely to each other.

c) Acknowledge their achievements. Celebrate!

3) Brainstorming: Now that we’ve got all these neat things up, take a moment to reflect on these accomplishments – in particular, the ones you participated in closely. Use your reflection to identify those elements you feel enabled you to innovate. Consider, for example: How did you start? What was accomplished? How did you do it? What knowledge and skills did you use? What tools did you use? What processes? Whose involvement did you need? What support did you need?

a) List one element per post-it until out of ideas.

b) Have participants take turns describing and posting each element on blank flip chart paper labeled “How and Why We Were Able To Do It!”
   i) Include duplicate items.
   ii) This information will be used in the next step, so listen closely to each other.

c) Acknowledge their hard work.

4) BREAK
5) Looking for Patterns: Now let’s see what patterns emerge. You may have already noticed some as we posted.
   a) Everyone on your feet to work as a team.
   b) Group like items together by putting those post-its together.
   c) Label the groups (using other-colored post-its).
   d) Shout out headings so others can find and use them.
   e) Stack duplicates within the designated categories.
   f) When in doubt, seek consensus.
   g) Ground Rules:
      i) No “miscellaneous” category
      ii) If greater than 10 different elements in a category, split and rename.

6) Missing Items Search: Now let’s take five minutes for a “missing items” search.
   a) Sit down, relax.
   b) Scrutinize the lists with your most careful eye.
   c) What’s missing? Might be move? Might be renamed?
   d) Make revisions.

7) Prioritization: Now let’s prioritize. In terms of leading you to success, enabling you to innovate, what elements were most important, moderately important, not at all important? In other words, if it was not present, would you have achieved the same result in the same way?
   a) You must discuss and agree on your rating as a group.
   b) Place a dot next to the element to indicate your decision.
      i) Red – Very Important
      ii) Yellow – Moderately Important
      iii) Green – Not Important At All
8) Final Words of Wisdom and Closing: Before we end our session, I’d like to ask you to share your wisdom so that this research experience is rewarding and enjoyable for all involved. Every organization has a culture, every individual has his/her preferences. How can I help make this an enjoyable and rewarding experience for you?

a) On an index card, finish the following sentence: “The one most important thing that you can do to help make this an enjoyable and rewarding experience for me is…”

b) Fold it and place in envelope.

c) Thank you for your participation! Look forward to working with you further.

d) Book interview/observation days for anyone who is able.