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Representing *Phronesis*:
Supporting Instructional Leadership Practice in Schools

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ABSTRACT

Sharing the practical wisdom of successful instructional leadership should be a key component of learning to be a school leader. The Aristotelian concept of *phronesis* provides a powerful organizing idea for understanding how we can access, document and communicate the wisdom of school leadership practice. This dissertation explores how *phronesis* can serve as guide for communicating the successful practices of school leadership through the development of innovative multimedia learning technologies. As the basis for a research method, *phronesis* is best expressed through narratives of practice that relay how strategies, goals, constraints, affordances and resources unfold in the enactment of leadership work. This dissertation argues that locally designed artifacts provide touchstones for researchers to access and communicate the wisdom of leadership practice. The research described here focuses on the case of Adams School, a Chicago Public elementary school whose sustained record of improved student achievement has been attributed, both within and outside the school, to outstanding leadership practice. Over the course of three years, a research team gathered observations, interviews and artifacts at Adams to document their practical wisdom. I present a Design Cycle Analysis Model to show how these data were organized into artifact-based narratives of practice. The data analysis section describes three narratives of practice organized around locally-designed artifacts:

- a professional development program (Breakfast Club);
- a formative assessment program (Five-Week Assessment);
- and a school-improvement planning process (SIP).

One of the narratives, Breakfast Club, was used as the basis for constructing a multimedia narrative of practice. The Breakfast Club case is then user-tested with Adams leaders and with interested practitioners from a variety of school settings to determine the fidelity and verisimilitude of the representation.

The conceptual framework and the methods discussed here contribute toward the development of principled research methods to make complex practices accessible to interested practitioners. Hopefully, this research will point toward fruitful ways for researchers to attend to the particulars of practice as their primary work, instead of as obstacles that must be overcome on the way to epistemic generalizations about practice. The *phronesis* is, after all, in the particulars.

DEDICATION

Practical wisdom, the central topic of this dissertation, has influenced my philosophical interests for as long as I remember. As I began to study philosophy as an undergraduate at Marquette University, I had the good fortune to learn from men such as James Robb, Walter Stohrer, and Michael Boylan, that philosophy was a matter of not only thinking well, but also of living well. In my graduate studies in philosophy, I turned from contemporary thinkers to reexamine the works of Plato and Aristotle. My guide and mentor in my graduate work, Reginald Allen, showed us the difference between the study of philosophy and of antiquity by bringing out what William James would call the "live options" implicit in the ethics and metaphysics of the Greeks. Reg's low-key elicitation of the drama inherent in the Platonic dialogues, the live options not well-addressed by the modern and post-modern metaphysical presuppositions, led me to understand how new questions can be sparked by very old answers.

I wish to thank my colleagues and friends, Barbara Preslin, Paula Etheridge, Joe Sowinski and Kathy Woytych at Seton Academy in South Holland Illinois, where I learned to teach and had the extraordinary opportunity to work with educators and leaders of the heart. In particular, I would like to thank Roberta Felker for taking a chance on a philosophy student with no teaching experience to teach in her school, for her encouragement to put my ideals to the test, and for her example of how a real leader lives and leads.

I remain very grateful for the opportunity to return to graduate school in mid-career. The Learning Sciences program at Northwestern University provided the ideal blend of challenging ideas, practical opportunities to do real work in real schools, and invigorating conversations with professors and peers. In particular, I wish to acknowledge three of my professors at Northwestern. Louis Gomez proved an advisor in the true sense, providing opportunities and constraints that

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0.0 Introduction[1]

     Successful work practices, in management, administration and teaching, are often inaccessible to researchers. We can recognize good practice when we see it, we can evaluate the outcomes of practices, and we can study the conditions of successful practices. But the practices themselves remain inaccessible to study. Practice is a complex phenomenon with at least three different aspects that cone together in human activity. First, practice refers to the day-to-day activity in which people routinely engage. Second, practice retains its ordinary sense in the repetition of actions to increase proficiency. And third, the regularities of practice can emerge into chunked traditions of behavior that are passed down as legitimate cultural or organizational packages of behavior. Researchers have focused on each of these elements of practice: Taylor's (1911; 1998) early and Mintzberg's more

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[1] This work draws upon and extends the research of two funded projects: 1) the Living Curriculum project (PIs Louis Gomez, Daniel Edelson and James Spillane: NSF Grant # 9720423) an NSF funded effort to develop web-based multimedia systems to share the practice of project-based science teaching with the education community; and 2) the Distributed Leadership project (PI James Spillane: NSF Grant #9819252) an NSF and Spencer Foundation funded effort to examine how leadership practices are socially and situationally distributed in urban elementary schools around math and literacy instruction. Most of the field work data for this dissertation, including most of the interviews and observations, were collected under the auspices and supervision of the Distributed Leadership project. The collection of the video and construction of the multimedia narratives of practice described in Chapters 3 and 4 were conducted under the auspices of both the Living Curriculum and Distributed Leadership projects.

recent (1989) time and motion studies attempt to catalog the regularities of the first form of practice; and the behavioral psychologists such as Skinner and Watson have concentrated on the second sense. Bourdieu (1990) led a sociological investigation of the third sense by addressing the autonomy of cultural practice as organizing rituals for society. However, neither of these approaches to practice address the comprehensive sense in which the three themes come together in human action. While most research is dedicated to the development, testing and replication of claims about practice that transcend a particular context, the study of how practice unfolds while rooted in specific context is often overlooked. In such cases, practice is lost.

This dissertation introduces a conceptual model and research methodology to access, document and communicate successful practice. The model proposed here takes a cognitive approach to practice. While practice is not solely a cognitive activity, it certainly does have a cognitive component. However, to get at the activity of practice, the theory of cognition proposed here must reach beyond what goes inside the individual mind. Aristotle's conception of *phronesis*, or practical wisdom, offers a unique conceptual foundation for investigating the situated nature of practical cognition. *Phronesis*, as we will see in Chapter 1, is the capacity for leaders to ascertain the appropriate ends for action and to successfully devise means to reach these ends. The key to understanding practical wisdom is to note the systemic interplay between context and practice, between intention and result, that characterizes many complex practices. This interplay of thinking, devising and action make *phronesis* an excellent candidate for developing coherent accounts of practice. Aristotle suggests that leadership forms a special case of *phronesis* as leaders act to secure the good for the community. This research focuses on a special case of leadership – instructional leadership in schools – to illustrate the wisdom of practice. Considering the practical wisdom of leadership suggests that *phronesis* can be located in a community, and points toward how

current research programs in distributed cognition and activity theory can be used to show how practice constructs and is constructed by the situation. Uncovering *phronesis*, as constituted by the patterns of interaction with actors in their situations, is the initial goal of accessing, documenting and communicating practice

The research program described here assumes that complex work practices are situated in organizations. Organizational artifacts, such as policies, meetings and meeting agendas, and designed programs, mediate individual action in organizations. In other words, organizational artifacts give both direction and a sense of context for everyday activity. Practitioners often design artifacts as solutions for emergent and long standing problems. In artifact design, practitioners often build their assumptions about how their practice into the structure of the artifact itself. Thus artifacts are "inscribed" with the ways in which practitioners understand their practice; their design and use indicates how they understand and negotiate their work worlds. This dissertation argues that these locally-designed artifacts open a window on practice, giving researchers access to the interplay between context and action that constitute practice.

Because practice unfolds over time, this research develops a framework and justification for using the construction and interpretation of narrative as an analytic tool. Narratives of practice, described in Chapter 2 and developed in Chapter 3, are the forms through which the unfolding stories of practice can be captured and analyzed. As a reality check to make sure that the narratives reflect the practice of the practitioners represented, Chapter 4 introduces the design and use of multimedia narratives of practice as a means to provide a reality check on the initial narratives, and outlines a method for how multimedia performance support technologies might support learning about exemplary instructional leadership practice in schools.

This study reviews three years of in-depth research at a single Chicago public elementary school with a well- documented record of student performance improvement that has been widely attributed to school leadership practice. Untangling how these leadership practices support instructional improvement, a key outcome of this study, will provide a handle for how researchers can access, document and share the practical wisdom of school leadership with and for interested others. The research presented here contributes toward the goals of understanding how to untangle and to make sense of interconnected practices in context. The untangling of *phronesis* makes sense of complex work practices for aspiring practitioners to learn, and provides rich occasions for reflection on practice for the local practitioners themselves.

0.1 Why leadership practice?

The goal of this dissertation is to make some headway into understanding how we can access, document and communicate good instructional leadership practices in schools. Understanding how we can help practitioners access and engage in best practices has long been a goal of educational and leadership research. Because instructional leadership is so strongly connected with student performance, accessing and communicating leadership practice is an important issue for policymakers, schools of education and practitioners alike (Leithwood and Stager, 1989). Instructional leadership is defined here as establishing the conditions for the possibility of instructional innovation in schools. We know that changing instruction in schools depends largely on conditions that leaders establish in schools. Ensuring teachers and students access to innovative ideas in schools depends critically upon such leadership. In other words, school leadership matters for instructional innovation. But *how* does leadership matter in schools. Researchers have mapped out much of the terrain of school leadership and have indicated elements crucial for leadership in successful schools, such as the provision and acquisition of resources, access and availability of professional

development opportunities, maintenance of a school culture amenable to risking new practices, and the establishment of an instructional zone in the school safe from student disruption on the one hand and meddling by external communities on the other (Purkey and Smith, 1983; Blase and Blase, 1998, Bolman and Deal, 1984, Seashore-Louis and Kruse, 1995, Heller and Firestone, 1995).

As a result of this long tradition of research, we know quite a bit about *which* conditions promote leadership for innovative instruction in schools. At the same time, we know quite a bit less about *how* school leaders establish these conditions, *how* such activities are artfully integrated into rich, existing school cultures, and *how* they are communicated from those who know to those who want to know. For widespread instructional innovation to become the norm in schools, we must explore *how* effective school leaders understand and implement instructional leadership practices. Only by understanding this *how*, by documenting and communicating how colleagues have navigated similar situations, can we hope to help similarly minded leaders overcome the obstacles in their paths.

However, in addition to these broad concerns of policy and practice, I approach this study of leadership practice from a more personal angle. As an aspiring school leader, I wanted to find examples of practice that could not only help me figure out what to do, but also to understand how to do it. As a high school teacher, I was approached by my principal with the opportunity to take on an administrative role as curriculum director. I had experienced some success as a classroom teacher in history, English and philosophy. In the classroom, I found that I could arrange the curriculum to guide students to whatever instructional goal I had in mind. Because I had access to student work, both in the form of artifacts and in observed interactions, I could assess student understanding to determine where they were having problems and to redirect the investigation in the direction of emergent interests. For example, if I wanted students to investigate the causes of the American Civil War, I could collect and distribute scholarly readings,

develop discussion questions and conduct discussions, give quizzes, organize debates and grade student papers. Access to each of these artifacts helped give access to student practice.

The challenge of working with teachers as an administrator was more difficult than I had anticipated. I tried to apply the organizational techniques that I had developed as a classroom teacher, but it seemed as if each initiative I proposed seemed required more prerequisite prior steps in order to bring the project to fruition. It seemed like the more initiatives I suggested, the greater the resistance I incurred among the faculty. As a result, I began to try to implement fewer programs, and I was disappointed with my ability to effect change in the school in which I was a proud faculty member. As I struggled, I thought about what kinds of course, advice or instruction would help to make a difference in my practice. My administrative colleagues were very supportive of these efforts, and while we were able to work together effectively, I was not able to successfully enact the programs I thought were needed at the school. My review of professional journals and scholarly research on leadership practice held another lesson – there seemed to be abundant research on *what* worked in classrooms and schools, but not nearly enough research on *how* successful program could be implemented in rich school contexts. The articles that did offer strategies for implementation seemed recipe-like, with little appreciation for the particulars of context. I also attended several University courses on leadership and administration. The courses tended to be heavily anecdotal, with experienced instructors that could tell stories about how they worked, but often absent any principled accounts of why their approach worked over other approaches. In sum, as I attempted to improve my professional practice, I found that the expensive and often frustrating methods of mentoring and trial and error seemed to offer the greatest effect in learning.

Several characteristics of my experience as an instructional leader now jump out at me. First, I realized that in my efforts to work with my colleagues, I had

neglected to give proper credit to the importance of establishing a learning community in my efforts as an instructional leader. My classroom experience should have told me of the importance of establishing a climate where students can risk new ideas and critiques without fear of retribution. In my efforts to engage in instructional leadership along the lines suggested by my classroom teaching, I had simply assumed that an analogous community existed among my colleagues on the faculty. However, realizing that I had not worked to develop such a community was one thing, and knowing what to do about it was quite another. I needed examples of how other school leaders worked to develop learning communities in their schools, focused on stories of how they faced (and overcame) obstacles and challenges.

Second, I had assumed that my ideas and my actions alone could act as the catalyst for systemic change. As a teacher, I was responsible for curriculum planning, and my teaching work was largely a matter of implementing (and redesigning on the fly) the plan I had developed. I had assumed that instructional leadership was also a matter of implementing a preconceived plan, instead of a matter of building up a sense of collective responsibility for both framing and solving instructional problems. Again I had underestimated the time and effort required to cultivate the conditions of successful learning with my colleagues, and I began to appreciate how successful leadership was a matter of guidance only in it was first a matter of establishing the conditions for successful change. Further, I came to realize that, unlike my traditional approach to teaching, school leadership seemed to be distributed across the people and the resources in the school (c.f. Spillane, Halverson and Diamond, 2001). My idea of implementing an instructional initiative would require interaction with my administrative team to determine whether this was indeed the course we needed to pursue. It would require coordinated efforts to co-design the initiative with interested teachers who would in turn try out the ideas in their classrooms, and would help lead subsequent

discussions about the initiatives. While I was able to determine, through discussion and through research, what some of these conditions would be, my linear, single agent model of change needed to give way to a more iterative, participatory model in which the school community together would come to realize the importance of the question before settling on the appropriate answers. However, while I began to develop a sense of which conditions were necessary to establish for instructional leadership, I was still at a loss about how these conditions might emerge in my school.

Third, in my teaching practice I had access to the artifacts that created the learning practices in my classrooms. One of my goals as a teacher was to help students disclose their existing practices through a consideration of the artifacts they had prepared. Student and curricular artifacts both organized the work in the classroom and helped to make class work visible for me and for other students. The determining character of these artifacts began to stand out as I reflected upon my experience as a leader. In the classroom, the curricular artifacts I designed and the artifacts developed by students *constituted* the work of the class. Examining these artifacts would allow an observer to understand the teaching and learning practices of the class. When I tried to follow this example as a leader, however, the artifacts to which I had access described tasks that seemed to lie completely outside the practices of teaching and learning in teacher's classrooms. For example, the initiative to begin a research discussion group in the English department seemed to appear to my colleagues as altogether irrelevant to their classroom practice. My efforts to establish an analogical relation between teachers and teachers that existed between teachers and students seemed to founder on the oft-noted disconnect between instructional and administrative practices in schools (Weick, 1976; Rowan, 1988). While artifacts, such as teacher evaluation forms, are commonly recognized as legitimate means to regulate teaching and learning practices, artifacts to help frame teaching and learning practices among teachers

and administrators did not seem to have equal legitimacy. Again, it seemed as though the work of instructional leadership was first to establish the conditions that would legitimate discussions about teaching and learning among the adults in the school. However, artifacts such as school-wide discussion programs or planning processes could play a vital role in helping to establish the conditions for such discussions in the school. These artifacts would be important tools for instructional leaders to establish a learning community among teachers and leaders that could subsequently address emergent problems in the community by drawing upon the social capital built among community members (c.f. Spillane, Hallett et. al., 2000). Thus the kinds of artifacts used to construct classroom teaching seemed to depend upon prior artifacts that would establish the conditions for the possibility of successful instruction. While these "foundational" artifacts, such as curricula, textbooks and daily instructional schedules, seemed built into the context of ordinary classroom practice, it seemed that a main task of instructional leadership was to build the analogue of these classroom foundational artifacts for an adult learning community in the school. And again, realizing *that* this was a key task for instructional leadership did not help to figure out what to *do* first. Cases of the how still needed to supplement examples of the what.

My early forays into administration, based on my experiences as a classroom teacher, did not seem to translate directly to my ability to engage in effective instructional leadership. A central goal of instructional leadership was to create the learning context that I had taken for granted in the classroom. I later realized that my knowledge of how to create a successful learning environment was largely tacit and expressed through the my assumptions of instructional artifact design and use. The first-order task of engaging in collaborative instructional evaluation and design was dependent on the second-order-task of establishing a learning community that would see instructional issues as open questions in need of collaborative solution. This struck me as a gradual and amorphous process that

unfolded over time rather than the concrete result of specific actions. The inaccessiblitity of where this process begins and where it leads was frustrating to an interested, but inexperienced, administrator. Still, because there are schools that seem to have established learning communities among the professionals in the school, it must be possible to access the artifacts and the patterns of use that lead to establishment of these professional communities.

0.2 Content outline

The central goal of the research presented in this dissertation is to understand and communicate what successful practitioners know by accessing and documenting examples of successful practice. The practice in question here is instructional leadership in schools. The first stage of the research consisted in identifying successful instructional leaders. Here I decided to follow a research path of depth rather than breadth by selecting to study a particular school with a well-established record of leadership success. Together with several colleagues, I spent over three years conducting interviews, gathering field notes, and establishing a video record of leadership practice at Adams School, a K-8 public school in Chicago. However, as we collected the data, I wondered about how we were going to make sense of the practical wisdom involved. In the fall of 1999, I developed the idea of a Design Cycle Analysis Model (DCAM) that used locally designed artifacts as a window into the consideration of the *phronesis* of leadership. Once identified, the artifacts serve as a window into leadership practice by acting as an occasion to investigate the network of problem-setting and problem-solving practices of school leadership.

The consequent examples of practice, or, as I term them below, *narratives of practice*, (Ch. 2-4) are developed around the artifacts that school leaders identified as important in building their instructional program. The end result of the research is a model for developing multimedia narratives of practice that can serve as occasions for learning and reflective practice for interested school leaders. Along

the way, however, I have developed several conceptual tools that help to organize and make sense of the process of developing narratives of practice. This dissertation elaborates the nature of these tools and describes an initial foray into their application. The next several sections offer a brief outline for the chapters that follow

0.2.1 Chapter 1: Understanding *Phronesis*

There have been many efforts to capture what school leaders and teachers know about instructional leadership through survey methods (e.g. Leithwood and Steinbach, 1996; Blase and Blase 1995). While these studies have yielded many insights about the characteristics of school leadership practice across schools, they often overlook the very depth of context key to understand *how* leaders develop and implement their ideas. Generalizations across schools about leadership practice, by definition, overlook precisely the idiosyncratic particulars of a given situation that practitioners must negotiate in order to try out new practices. To understand what school leaders know in a form accessible to other leaders, I have developed a theory of situated expertise grounded in Aristotle's conception of *phronesis*, or practical wisdom.

Chapter 1 outlines an theory of situated expertise grounded in Aristotle's initial insights about the nature of *phronesis*. *Phronesis* is the root concept in a very long-standing intellectual current that aims to articulate the wisdom that guides everyday practice. The chapter opens (Section 1.1) with a consideration or the context in which Aristotle worked to establish *phronesis* as a kind of knowledge that bridged the contemporary, and contrary, Greek paradigms of wisdom as *episteme,* the Platonic disinterested contemplation of the eternal forms or, versus *metis*, the Homeric cunning personified by Odysseus. Aristotle's account of *phronesis* (1.1.2) names a human capacity that reconciles *episteme* and *metis* by showing how principled knowledge, embodied in character through the cultivation of virtuous habit, can guide everyday action. Section 1.1.3 shows how *phronesis*

is exercised through the application of *techne*, or productive arts, to the emergent situations of daily life. Aristotle's discussion of *techne*, or productive art, brings out the executive functions of *phronesis* as the kind of wisdom that determines when it is appropriate to apply an art, when to change arts, and how to evaluate artifacts. An important aspect of *phronesis* is the ability to select and to apply the appropriate art to achieve the appropriate end, and the ability to judge which ends and means are appropriate. Since the matching of means to particular ends marks the exercise of practical wisdom, *phronesis* cannot be well understood apart from the particular context in which it is exercised. Aristotle contends that in *phronesis*, particulars matter. Absent the relevant context, *phronesis* evaporates into aphorism.

What are the implications for a theory based on *phronesis* given this reliance upon particulars? In discussing the kinds of knowledge that correspond to the capacities of wisdom, Aristotle draws a sharp contrast between *phronesis* and theoretical knowledge. Whereas the virtue of theoretical knowledge is the ability to transcend particular time and place, *phronesis* is necessarily connected to particulars. This contrast makes it clear that a theoretical cataloging of *phronesis* would not be valuable considering the infinite number of particulars emergent in novel situations. Beginning in medieval canon law, the practice of casuistry was developed to show this selective application of principles to novel cases both to establish precedent and to form the basis for a instructional system in legal study. This use of relevant case as example and precedent continues to form the basis of our legal system. Thus, from the beginning, the study of practical wisdom has aimed less at cataloging instances than at establishing instructional examples as models and as guides for subsequent practice. Section 1.2 argues that the documentation of *phronesis* through case construction carries this implicit pedagogical slant – that the main reason for building cases of the application of practical wisdom is to teach interested practitioners about best practices. Cases of

phronesis can refine the apprenticeship model where many aspiring leaders learn their craft (1.2.2) by providing rich, appropriate examples that can serve as occasions for reflective practice (1.2.3).

 The discussion continues (Section 1.3) with a consideration of the relation between *phronesis* and leadership. In the *Nicomachean Ethics*, Aristotle describes two different forms of *phronesis* – personal *phronesis* used to make decisions regarding the good of the self, and political *phronesis* used to make decisions for the good of the community (1.3). Although there is an interesting tradition that considers the relation between personal and political *phronesis*,[2] for the remainder of the dissertation I will use the term *phronesis* and the phrase practical wisdom to refer to Aristotle's category of political *phronesis*. Section 1.3.1 argues that the emphasis on the contingencies of particular situations allows *phronesis* to be considered as a form of distributed cognition. The distributed leadership framework (Spillane, Halverson and Diamond, 2001) helps us to think about the exercise of *phronesis* through a consideration of the how the tasks of leadership are socially and situationally distributed (1.3.1.3). Instructional leadership in schools indicates a special form of *phronesis*, as school leaders seek to improve the conditions of teaching and learning for teachers and students. Section 1.3.2 discusses the how the tension between managerial and transformational leadership can be resolved by taking a task-based, distributed approach to the *phronesis* of leadership. Thus the *phronesis* of school leadership concerns the tasks and task-networks leaders establish to create the conditions for instructional improvement in schools.

Which features of leadership tasks best reveal the *phronesis* of school leadership? Section 1.4 shows how the research on expertise indicates that the exercise of *phronesis* consists largely in the activities of problem-setting and problem-solving.

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[2] This distinction is anticipated by the consideration of whether virtue can be learned, grounded in several of the Platonic dialogues.

The key aspect of *phronesis,* and the most difficult to study, is the stage of apperception, or seeing-as, that forms each problem-setting action (1.4.2). Patterns of apperception, of the ways that practitioners see problems, are shaped by habit and experience. The development of the *phronesis* of leadership is the story of how habits of problem-setting and –solving are learned and emerge over time. Prior research on the expertise of school leadership (1.4.3) reveals that expert school leaders constrain problems and select relevant features of situations more adeptly than novices, but does not help to determine how these practices unfold in action. Understanding the *phronesis* of leadership involves tracing tasks backwards to disclose the relevant problem-setting-and –solving practices. Following this course of tracing the problem-setting and –solving practices of multiple tasks over time will give us some insight into the *phronesis* of school leadership.

The account of *phronesis* offered here attempts to make and old idea carry a modern, practical load. Practical tasks, such as the education of school leaders, require practical theories of knowledge for guidance. My exploration through topics related to practical wisdom has perhaps been more enlightening for me than it will be for my reader. As I began this project, I was uncertain of the relation between *phronesis* and school leadership. I felt that current research on school leadership was missing a vital, pedagogical component that could help turn best practice into live options for aspiring school leaders. I saw this pedagogical component in a *phronetic* approach to leadership, and I have attempted in Chapter 1 to operationalize Aristotle's idea into a viable conceptual framework for thinking about leadership. For readers more interested in the application rather than the development of this idea, this introduction may suffice to set up the application and testing of these ideas in Chapters 2-4.

0.2.2 Chapter 2: Accessing *Phronesis*

The relevant features of *phronesis* are the patterns of problem-setting and solving by school leaders over time. Chapter 2 outlines a methodology grounded in qualitative research methods, collaborative design, and distributed cognition designed to open a window on the practical wisdom of school leadership. Design research builds on more traditional qualitative research by creating a context in which researchers and practitioners alike can put their assumptions on the table in the collaborative building of an artifact. The problem-setting and –solving aspects of design research seem especially well-suited to a consideration of *phronesis*. However, this form of researcher access to meaningful practice is rare – teachers, school leaders and researchers are often differently motivated to participate in design projects, and consequently their efforts may not reflect their authentic assumptions about the project at hand. Nevertheless, design research points toward three main contexts in which researchers can discuss problem-setting- and solving patterns with practitioners (section 2.1):

- *Researcher-practitioner cooperative design efforts*. This form of collaborative design involves both researchers and practitioners in helping to frame and solve problems. While excellent opportunities for research, researcher-practitioner cooperative design efforts often require significant advance planning, and may not surface the *ad hoc* nature of daily problem-setting and solving practices.

- *Observed practitioner-practitioner collaborative design efforts.* School leaders often engage in collaborative design efforts to solve both acute and chronic problems as they emerge in daily practice. Since they do not participate in the design process, researchers are not forced to make their assumptions about the nature and outcomes of the work public during the process. Observation of collaborative design processes thus gives researchers access to a greater range of design practices important to the

school community, but do not give a strong test of the researchers' own assumptions about the practice.

- *Recounted collaborative design efforts.* Programs that local leaders consider significant to the current instructional program as opportunities provides a powerful window to investigate previous problem-setting and -solving practices. Recounted collaborative design efforts help researchers focus in on the practices directly relevant to current instructional priorities, but the distance from the original problem-setting and –solving phases raises questions about the reliability of reconstructed accounts.

Once accessed, the resultant data must be organized in ways that make sense both to practitioners and researchers. Bruner's (1990) distinction between paradigmatic and narrative approaches to research, which nicely parallels Aristotle's distinction between *episteme* and *phronesis*, provides the theoretical foundation for the construction of phronetic cases of practice. While paradigmatic accounts try to get at what is true across situations, Bruner claims that narrative accounts set down how events, actors and settings fit together within situations. Paradigmatic and narrative accounts also have different criteria of evaluation. Whereas paradigmatic claims rely on hypothesis verification by empirical proof, narratives rely upon a principle of *verisimilitude* for their truth.

The aim of conducting research through the analysis and reconstruction of narratives is to produce *narratives of practice* that will serve as occasions for reflective practice and as learning opportunities for interested practitioners. Polkinghorne's (1995) contrast between narrative analysis and the analysis of narrative points toward how the data can be analyzed and organized into meaningful narratives of practice. A key question becomes the selection of data are appropriate for analysis and narrative reconstruction. Section 2.3 proposes the Design Cycle Analysis Model (DCAM) as a analytic framework to organize data into narratives of practice. DCAM uses collaboratively designed artifacts that

school leaders signal as central to their instructional practice as a means to collect data about the problem-setting and –solving practices of the school community. The DCAM suggests that since problem-setting and –solving activities often result in artifacts, we should be able to read the process backwards and use artifacts to disclose problem-setting and –solving practices. Asking practitioners which artifacts are important in their practice helps us follow the patterns of *phronesis* leaders regard as key. While this may not guarantee that we capture practical wisdom in the process, it may help our chance of discerning the prevailing problem-setting and –solving patterns in the school. Using several kinds of artifacts as occasions for data collection and for constructing narratives of practice helps build a sense of triangulation in both the data analysis and reconstruction. Chapter 2 continues with a description of how multimedia narratives of practice can be used to provide a test of verisimilitude for narratives of practice. Section 2.4 describes how prior work on the Living Curriculum project provides a design framework to guide both the construction and the user testing of multimedia narratives of practice. The chapter concludes (Section 2.5) with a justification for the selection of Adams school as an appropriate site for investigating *phronesis*.

0.2.3 Chapter 3: Representing *Phronesis*

Chapter 3 provides three examples of narratives of practice developed according to the DCAM framework. The chapter opens with a catalog of relevant artifacts uncovered through the data collection process at Adams. Three of the artifacts frequently cited as significant to instructional leadership at Adams were selected as suitable candidates for development into narratives of practice. These artifacts, as described below in sections 3.3-3.5, include:

- *Breakfast Club*. Breakfast Club was designed in 1995 as an opportunity for teachers to discuss research relevant to current instructional initiatives and practices in the school. Each month a teacher leads a discussion before the school day begins about a piece of research, usually about reading or

writing instruction, with group of K-3 teachers and administrators over a hot breakfast.

- *Five-Week Assessment*. The advent of high-stakes testing in Chicago holds schools accountable for student performance in language arts and math. However, the summative data resulting from the exams had not proven very helpful for the Adams community to guide instructional changes. Beginning in 1996, several administrators and teachers reverse-engineered the mandated district tests to discern the critical skills for students to develop during the course of the year. They then collaboratively developed a Five-Week Assessment program that would provide formative information for how well students were achieving their goals. The assessment program has been fine-tuned over the years in light of changes in the standardized testing needs, and is now an institutionalized part of the school culture.

- *School-Improvement Planning Process*. The school district requires the development of an annual School Improvement Plan (SIP)[3] to guide funding initiatives within the school around district-mandated instructional goals in language-arts and math achievement as well as community involvement in instruction. The Adams community takes the SIP as an opportunity for collaborative design and refinement of the instructional program, with sub-committees meeting throughout the year and whole-faculty meetings in the spring to contribute to and refine the final plan.

The narratives of practice resulting from DCAM analysis showed not only the problem-setting and -solving practices that led to the artifact, but also revealed the

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[3] The SIP implemented in Chicago is a generic planning process that specifies the goals for school improvement while leaving the process itself relatively unspecified. The Chicago SIP should not be confused with the Keefe and Howard (1997) SIP, which helps organizationsdevelop based on a plan of shared norms and values, personal mastery, critical reflection and collaboration.

interconnected network of previously designed artifacts and institutional resources relied upon by school leaders in their work. Pulling on the threads of artifact construction leads to a deeper understanding of how this leadership resources system functions at Adams. While not necessarily generalizable to other school situations, an articulation of the features of this systemic interaction would be evocative for aspiring leaders interested in how programs and initiatives "fit together" in successful schools. Using the sense made by these narratives of practice points toward where we can find the practical wisdom of school leadership in the sense-making and resource-allocation activities of school leaders.

0.2.4 Chapter 4: Sharing *Phronesis*

Chapter 4 discusses the construction and user-testing of a prototype multimedia narrative of practice based on the Breakfast Club case.[4] Building artifact-based narratives of practice, as described in Chapter 3, can help to disclose patterns of how leaders set and solve problems in the school. However, without a check on narrative verisimilitude, designers have little idea of whether they got the story right. Chapter 4 opens with a discussion of how user-testing of multimedia narratives can help to provide a measure of verisimilitude for narratives of practice. Section 4.2 describes the design and research program of the Living Curriculum project's effort to build a performance support system for teaching technology rich project-based science curricula. Greg Shrader's research (2000) pioneered the development of the teacher version of the Living Curriculum. Shrader used the structure of the project-based science curriculum as an template to organize and present multimedia examples of teacher practice. The Living Curriculum was intended to address school leaders, parents, and students as well as teachers. The Living Curriculum for School Leaders (LSCL) presented in

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[4] I am deeply grateful to Baylen Linnekin for designing and implementing the prototype LCSL system and for co-conducting and co-analyzing the subsequent user-testing study.

Chapter 4 relies heavily on the Shrader's design prototype with several key exceptions. First, as mentioned earlier in this introduction, the lack of a clear analogue to curriculum for organizing the practice of school leaders problematizes the mapping made by Shrader. One of the intended outcomes of the LCSL design is to use a preliminary stab at a task model for organizing the work of school leaders to begin to understand what the analogue of curriculum for school leaders might be. Second, the performance support system for project-based science is different for teachers than it is for administrators. Whereas curriculum is what teachers do, curriculum is what leaders support -- and the activity of supporting is different from doing. Determining and documenting the conditions for the possibility of engaging, project-based instruction is different from teaching science, and requires a different organizational framework.

Section 4.3 summarizes a user-testing process with 11 school leaders both within and outside the Adams school community. Each leader spent about an hour going through the system and commenting on aspects of interest. While Adams leaders commented the several mistakes they saw in the system, many of their comments were directed toward observations for how Breakfast Club came about and how it subsequently generated related professional development efforts in the school. Leaders external to the Adams community commented most frequently on the feasibility of the program, and often reminisced about programs similar to Breakfast Club in their own schools. The chapter concludes with several general observations (and questions still to be resolved) about the problem-setting and problem-solving practices that emerged in the analysis, reconstruction and sharing of the narratives of practice.

0.5 Conclusion

The study contributes toward the goals of the Distributed Leadership project by developing more coherent and focused means to understand improvement planning efforts in schools, and toward the aims of the Living

Curriculum project through developing means to represent the complex practice of supporting instructional leadership through multimedia web-based systems. In the quest for a useful means to access, document and share the *phronesis* of school leadership, this research project spans a considerable range of disciplines and interests to establish a viable methodology and rationale. Like all such efforts, the present study risks skating across the surface of too many ideas in pursuit of an overarching goal. I have tried to achieve a balance between depth and breadth in the argument each step of the way, providing the background information appropriate to make sense of each phase of the argument. As I stated in the opening section, I have keenly felt, in my own career as an instructional leader, the absence of the kinds of expertise I seek to document here. The pursuit of viable means to access and use the practical wisdom of successful school leaders has, for me, a personal as well as a scholarly motivation. I hope that my passion to find workable answers to the challenge of helping practitioners learn complex questions has not gotten in the way of the argument, and that it lends more light than heat to the search for ways to understand practice.

CHAPTER 1

UNDERSTANDING *PHRONESIS*

1.0 Introduction

Thinking about the knowledge that guides action has a long and somewhat covert history in Western thought. Dunne (1992) discusses how, after centuries of relative neglect, the elusive nature of practical wisdom has occupied center stage for prominent recent thinkers such as Arendt, Gadamer, and Habermas. In the past century, the studies of sociology and anthropology have attempted to understand the contexts and patterns implicit in complex human action, and have developed sophisticated methodologies to capture the rhythms of practice. These disciplines were designed, in part, to correct for the bias in our scientific tradition to establish truths that transcend particular contexts and situations. Traditional scientific research is explicit about the knowledge produced, but often quiet about the ways work is done and is passed on to interested practitioners. This contrast is most clearly seen in recent efforts to anchor the achievements of modern scientific research in the communities of practice and sociological contexts in which scientific work is done (e.g. Latour, 1987), which are often designed around the communication of best research practice to interested new practitioners. Understanding how practices are organized and communicated for school leadership requires a focus not only on the goals to be achieved by quality school communities, but also on uncovering and sharing the tasks and the contexts in which good work is currently done.

This contrast between the often explicit theoretical goals of schools and the often implicit practice of daily work is rooted in some of the earliest attempts to distinguish among different forms of knowledge and ways of knowing. As in

many other branches of thought, Aristotle's early work in epistemology and moral theory forms the foundation for how subsequent thinkers have conceptualized the relation of theory and practice. This dissertation will begin with an examination of Aristotle's Nicomachean Ethics, which offers an account of what it means to be good and to do well in human life. After discussions of happiness, virtue and justice, Aristotle leads us into a leading discussion about the different forms of human wisdom. It is in the Nicomachean Ethics, Book 6, that we can find one of the most interesting expositions of the relation between theoretical and practical wisdom. Most of Chapter 1 is dedicated to unpacking what Aristotle means by practical wisdom, and how this idea relates to more contemporary investigations of distributed cognition, leadership practice, and expertise.

Phronesis, or practical wisdom, refers to an individual's capacity to discern what is worth doing together with the ability to get it done, a "reasoned and true state of capacity to act with regard to human goods" (*NE* 1140b25).[1] Practical wisdom differs from theoretical wisdom (*scientia*) by an conclusion in human action. Whereas theoretical wisdom is often abstracted from action, practical wisdom is the kind of knowledge and capacity that guides action. *Phronesis* is an umbrella cognitive capacity that coordinates judgment, understanding, and insight to result in effective action. A capacity acquired through experience, *phronesis* helps practitioners to ask penetrating questions, provide insight into the

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[1] The figures and letters used almost universally to quote Aristotle refer to a Renaissance edition of his works published in Geneva in 1578 by a famed printer and humanist of the time named Henri Estienne (1528-1598), also known by the Latinized version of his name: Stephanus. This complete edition of Aristotle's works was in three volumes, whose pages were continuously numbered from the beginning to the end of each volume. Each page of this edition is split into two columns, the right one providing the Greek text and the left one a Latin translation (by Jean de Serres). In between the two columns are printed letters from a to e dividing the column into five sections. Based on this, a quotation of Aristotle includes the title and the page number in the Stephanus edition followed by the letter of the section that includes the first word of the quotation. No volume number needs to be provided because no dialogue splits over two volumes, and thus, the dialogue name suffices to make the reference unambiguous. Quotations take the form *Metaphysics* 1024a or *Physics* 277e. Quotations are usually given with reference to the start and end point of the quoted section. (adapted from http://plato.evansville.edu/handbook/stephanus.htm)

implications of actions and events, and to advise appropriate courses of action. *Phronesis* involves the ability to understand how complex and messy situations hang together, and to discern the affordances whereby appropriate actions might be founded. *Phronesis* is the ability to walk the talk.

This thesis is based on an argument that the Aristotelian idea of *phronesis*, or practical wisdom, offers an valuable framework to capture and represent the wisdom of instructional leaders in schools. In the Introduction above, I have developed a need for why *phronesis* is appropriate for the study of school leadership. While suggestive, Aristotle's account of *phronesis* offered in the Nicomachean Ethics stands in need of consolidation into a coherent framework that can serve to guide research. The framework developed here will weave together the following features in Aristotle's account of *phronesis*:

- a reasoned and true state or capacity to act in regard to human goods;
- the ability to fit the right rule to the appropriate circumstance;
- the bridge between *episteme* and *metis*; the ability to appropriately apply theoretical wisdom with cunning;
- the capacity for rational deliberation that results in effective action;
- acquired through experience;
- the result of the reflection on a life well-lived;
- regulated through the habits of character;
- the ability to articulate and tell others about how the tasks were undertaken;

In addition, the framework developed here will supplement Aristotle's account with the following complementary features of recent research in cognitive science:

- the cycle of *phronesis* is only complete if it results in an opportunity to reflect upon and alter practice;
- the ability to deliberate upon experience, precedent and insight in order to devise means to address problematic situations;
- the ability to turn an ill-structured into a well-structured problem;

- a leaders' ability to negotiate a feasible path through a complex setting.

In this Chapter I connect these features of *phronesis* in the hope of fleshing out a viable model for what needs to be captured and represented about the practical wisdom of school leadership. To begin, any account of *phronesis* needs to be grounded in Book VI of Aristotle's *Nicomachean Ethics*. In Section 1.1, I describe how Aristotle's view is situated in the context of the contemporary intellectual giants Plato and Homer by showing how *phronesis* is a middle way between the dominant conceptions of wisdom as Platonic disinterested contemplation and the Homeric guile and cunning of Odysseus. Sections 1.1.2 & 1.1.3 offer a detailed analysis of Aristotle's compact and enigmatic account of *phronesis* in Book VI, drawing out themes that will serve to provide a viable framework to identify the *phronesis* of school leadership. Section 1.2 considers the essential connection between representing and learning *phronesis*. Since practical wisdom is, by definition, not a kind of theory, it follows that *phronesis* can only be found in the situations in which it is exercised. This calls for a special kind of pedagogical research method aimed at helping practitioners access and use the knowledge in context rather than aiming to lift the knowledge from its context. In Section 1.3, I draw out the implications of Aristotle's distinction between personal and political *phronesis* to argue that a distributed account of leadership provides the appropriate framework to access the practical wisdom of leaders. In Section 1.4, I argue that recent research on expertise offers a clue for how the mechanism of *phronesis* works. While problem-framing and problem-solving practices seem to form the fundamental activities of *phronesis*, and are necessary components of any account of practical wisdom, the *phronesis* of a community of leaders must go beyond isolated examples of problem-setting and solving to understand the patterns in the practices that develop and change over time. Finally, in Section 1.5, I draw the discussion to an end in order to offer an operational definition of *phronesis* that will serve as a guide for the efforts to

access, document, and represent practical wisdom that occupy the remainder of this thesis.

1.1 Aristotle and *Phronesis*

The *Nicomachean Ethics* provides Aristotle's account of happiness and how we can achieve it. For Aristotle, happiness is the goal of human life, and much of the *Ethics* is concerned with the varying means to happiness. Aristotle considers happiness not as a temporary state or feeling, but rather as a way of life that enables us to make virtuous choices and to avoid the self-inflicted punishments of vice. Aristotle's account of ethics rests on a naturalistic assumption that there are certain ways to organize our lives that will result in happiness, and a great many others that result in distress and sorrow. Separating the former from the latter is largely a matter of first articulating the virtues that constitute the life well lived, opposing the virtues to their corresponding vices, and to establish the kind of character that can act virtuously as a matter of habit. Building a character is the goal first of education, then of political life.

In cataloguing the virtues along which character should be built, Aristotle recognized that much of ethics had to do with inculcating the ability to discern and act upon the right rule. In considering the relation of ethical knowledge and action, Aristotle expanded the famous Socratic equation of knowledge and virtue. By knowledge, Socrates meant *episteme*, a form a principled knowledge that existed independently of the knower. Epistemic knowledge was universal (equally true for all knowers), eternal (unchanging over time) and foundational (qualities of in the world of the senses were known by their relation to epistemic truths). As received and codified by Aristotle, the goals of the sciences (mainly mathematics, physics and philosophy) were to uncover, catalogue and communicate epistemic knowledge. Socrates seemed to claim that all virtues were forms of knowledge, and that the kinds of knowledge that guided action were fundamentally the same as those that guided scientific investigation (c.f. Plato's *Protagoras* 351-358; *Meno*

87c-89a). The Socratic insight has had long-standing implications for our study of ethics and practice – for if there is ultimately one kind of knowledge, then the knowledge gained through research of human affairs (e.g. ethics, history, and the arts) will have the same fundamental characteristics as scientific knowledge. Aristotle explained that the relation between knowledge and virtue was more complex than this— there must be an underlying capacity of discernment, practical wisdom, that can reconcile the right rules with the exercise of the appropriate virtues in particular situations (c.f. NE 1144b 16-29). Aristotle begins Book VI with a distinction between the kinds of knowledge "of things whose originative causes are invariable" (the principles of scientific knowledge, or *episteme*) and the knowledge "of things variable" (moral philosophy and, by implication, the Socratic unity of knowledge and virtue) (NE 1139b8) and points toward a conception of practical wisdom, or *phronesis*, that is quite different from the Platonic conception of *episteme*. This wisdom goes beyond the transcendent wisdom of the good described by Plato as belonging to the Philosopher Kings in the Republic, and the guile and cunning wisdom displayed by Ulysses in Homer's Odyssey. Practical wisdom, that is, the ability to fit the right rule to the appropriate circumstance, provided for Aristotle a middle road between wisdom and guile that opened a new understanding for how we can learn and teach about the knowledge of complex practices.

In the next section, I will consider Aristotle's account of practical wisdom in the context of two powerful rival accounts of the Platonic and the Homeric senses of wisdom. In the Platonic sense, wisdom consists in the knowledge of what truly is, the eternal, immutable and intelligible forms or ideas. The wise man is the one who transcends the here and now to turn his gaze upward -- comprehending and appreciating the Forms of goodness and beauty. In Plato's great political work, the *Republic*, the wisdom of the ideal form of the good is naturally translate into the ability to guide the day-to-day activities of the

philosopher king, the ruler who is marked by the ability to do the good he knows.[2]
Homeric wisdom, on the other hand, is represented by the shrewdness and
effectiveness of Ulysses. The wisdom of Ulysses seems to be the ability to devise
the appropriate means to achieve a desired end; Platonic wisdom consists mainly is
understanding and appreciating the ends worth desiring. *Phronesis* is the capacity
to navigate toward appropriate goals.

1.1.1 Plato and the Philosopher King

The Socratic association of knowledge with virtue guided Plato's
identification of the philosopher king as the legitimate ruler of the ideal state in the
Republic. Plato claimed since the philosopher would, over the course of a lifetime
of study, come to understand the good in the form of *episteme* – a kind of
knowledge that is universal, eternal and true. Our ability to apprehend *episteme* is
grounded in reason, but since we are not born with the ability to reason clearly, our
souls must be cultivated to become receptive to the subtle forms in which *episteme*
is manifested in the sensible world of change. This process of cultivation, or
education, forms the core of the political program of the *Republic*. The republic
describes how, after over fifty years of training, public service, and teaching, the
reasoning capacity of the leader may be adequately trained to appreciate the nature
of the good, and be able to exercise political leadership in accordance with this
understanding (c.f. *Republic* 473d-e). These leaders, or philosopher-kings, are
marked by the twin ability to know and do the good for themselves and for their
community. However, Plato's account of the training of the philosopher king
focuses more on the acquisition than the exercise of their knowledge. The
description offered of the education of the philosopher kings relies heavily on
cultivating the ability to understand abstract thought and engage in dialectical
interchange (c.f. *Republic* 521-541). Plato offers little about the specifics of how

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[2] See, for example, Popper's (1945) critique of the impracticality of Plato's account.

this knowledge translates to a resolution of the inevitable issues of the state that fall to real statesmen. Plato seems to acknowledge that, given the temporal and imperfect nature of our grasp upon ideas, human society will always drift toward imperfection (c.f. *Republic* 546-7). Plato seems to recognize that the specifics of this drift might arise not in our misunderstanding of the good, but in the imprecision of the application, in our inability to discern the appropriate exercise of the good in the world (*Republic* 546). Given the competing claims for action that characterize statesmanship, the Kings' knowledge of the good quickly demands that the practice of leadership be transformed into a matter of implementation. Plato's conception of wisdom provides an account of the nature of principled knowledge without sufficient attention paid to its exercise. It is one thing to note that the knowledge of the good will carry the day, and another altogether to describe how this knowledge will unfold and guide the practice of the state.

1.1.2 Odysseus and *Metis*

Alongside this Platonic political wisdom grounded in our ability to access and apply *episteme*, there exists a parallel Greek tradition of wisdom grounded in Homer and the Greek myths. The Homeric sense of wisdom, embodied in Ulysses, is marked not by the ability to apprehend that which is beyond the senses, but by how we can resourcefully develop appropriate strategies and goals to guide us through tricky situations. In the *Odyssey*, Ulysses guides his fortune through perilous circumstance by a combination of allegiance, foreknowledge, experience and craftiness. His wisdom is a worldliness that resorts to lies, ridicule (my name is Nobody – Book IX), deception (acting the beggar in his return to Ithaca – Book XVII) and ruthlessness (the slaughter of the suitors – Book XXII).   Detienne and Vernant (1991) name this parallel conception of wisdom *metis*, and find its path tangled throughout the history of Greek thought. *Metis*, or cunning intelligence, was "brought into play in large sectors of their (Greek) social and spiritual life

(and) valued highly within their religious system" (Detienne and Vernant, 1991 p.3). In this tradition, *metis* is the practical intelligence of knowing which laws to apply to a given situation, how much of a particular rule rather than another, and when to forgo the rules in favor of shifting to other goals. *Metis* is represented in many of Aesop's fables as the wisdom embodied in the "moral of the story," the nugget of practical wisdom that the resourceful protagonist will keep in mind in encountering emergent situations.

Metis is synonymous with living by wits, and is often necessary for success when struggling with those in power. *Metis* is:

> displayed by the use of methods that of a different order whose effect is to reverse the natural outcome of the encounter and to allow victory to fall to the party whose defeat had appeared inevitable (Detienne and Vernant, 1991 p.13).

Because *metis* works to reverse anticipated outcomes, its exercise elicits ambiguous reaction. While *metis* is often admired as the intervention of superior insight and skill, it can also look like manipulation of the rules, cheating, or treachery. In Greek mythology, Detienne and Vernant note how the theme of *hubris*, or overreaching pride, characterizes the affairs of the gods as well as men.

> In effect, whatever the strength of a man or a god, there comes a time when he confronts one stronger than himself. Only superior *metis* can give…truly sovereign power (1991, p.13).

Metis is further differentiated from *episteme* because "operates on a shifting terrain, in uncertain and ambiguous situations" (p. 14). The predictable discovery and use of *episteme* depends upon the control of regular contexts, while *metis* is precisely the combination of knowledge and skill that can take advantage of surprise. During the uncertain situation, a person with superior *metis* maintains a "state of vigilant premeditation" and is "always ready to pounce" when the opportunity for action presents itself (p. 15). Although *metis* involves the

combination of foresight and memory developed through long experience, it must go beyond knowledge to fashion appropriate action. *Metis* is the knowledge of the successful practitioner, not the analyst.

Detienne and Vernant add one further note — *metis* is never one thing, it is always multifaceted and difficult to identify. The multifaceted face of *metis* makes it difficult to pin down, creating space for the practitioner to size up situations without betraying plans before ready to act. "Its field of application is the world of movement…it bears on fluid situations which are constantly changing" (Detienne and Vernant, 1991 p. 20). Unlike the stasis of *episteme*, in order for *metis* to be successfully exercised, it must "adapt itself constantly to events as they succeed on another and be pliable enough to accommodate the unexpected so as to implement the plan in mind more successfully" (p. 20). Observers often see deceit and cunning within the fluid, concealed exercise of *metis*, leading to both the admiration and distrust of the practitioner. Skilled managers and administrators who must successfully adapt a variety of goals and interests to fluid, shifting situation as a living, and are often accused of unprincipled action, deception and hypocrisy. *Metis* "gives itself out as other than it is" (p. 23) to preserve a space for action in the face of more powerful interests.

Metis alone is resourcefulness without purpose, cunning without a higher goal worth achieving. The criminal as well as the leader can be a master of *metis*. For leadership, *metis* alone is not a sufficient form of knowledge to account for practical wisdom. Without a sense of a good worth aiming for, *metis* is a mercenary among virtues, selling its mediational services to achieve the going concerns. It remains for Aristotle to bring together *episteme* and *metis* in a principled account of *phronesis*.

1.1.3 *Phronesis* as a Bridge between *Episteme* and *Metis*

Sandwiched between accounts of justice (Book V) and continence (Book VII), Aristotle's account of practical wisdom in Book VI provides an enigmatic

interlude in the exposition of the *Nicomachean Ethics*. While bowing to a strict definition of scientific knowledge grounded in Platonic *episteme*, Aristotle argues for an alternative conception of the kind of knowledge that guides practice. In Book VI, Aristotle begins by showing how the knowledge that guides art and action differs from the knowledge that guides science. Aristotle's discussion of practical wisdom in is grounded in his prior discussions of the nature (character) and excellence (virtue) of the soul. Earlier in the *Nicomachean Ethics*, Aristotle claims that the soul is divided rational and irrational parts, and that the rational part is marked by the ability "to grasp a rule or general principle" (NE 1139a4). Of the rational part, there seems to be a further distinction, between the part "by which we contemplate the kind of thing whose originate causes are invariable" and "one by which we contemplate variable things" (NE 1139a8). By "invariable" and "variable" causes Aristotle is pointing toward the distinction between the objects of scientific (epistemic) and practical thought. Knowledge of objects with "invariable causes" satisfy the requirements of epistemic stability and universality that can be replicated under similar circumstances. But knowledge of objects with "variable causes" are of the events that emerge regularly in our daily lives whose causes may be difficult (or irrelevant) to discern. In a famous passage earlier in the Ethics, Aristotle reiterates the distinction in terms of the investigator:

> It is the mark of the educated man to look for precision into each class of things just so far as the nature of the subject admits; it is evidently equally foolish to accept probable reasoning from a mathematician and to demand from a rhetorician scientific proofs (1094b24-28).

In the Ethics, he reiterates this distinction between mathematics and rhetoric by designating the former as *episteme*, and the latter as calculative or deliberative knowledge. In Aristotle's view "no one deliberates about what is invariant"[3] (NE 1139a13). While knowing rules is a matter of epistemic knowledge, knowing when (and how) to apply rules, and knowing which rules to apply, is a matter of deliberative knowledge. Deliberation about the variant is necessary for action, for it is through deliberation between various course of action that reason guides us about what to do here and now.

Demonstration is the activity of marshalling epistemic knowledge into proper argument forms to draw invariable conclusions. Much of Aristotle's logical writing (c.f. *Prior Analytics*) is dedicated to developing the rules and forms for valid argument. However, the knowledge that guides action involves deliberation rather than demonstration because it refers to things whose causes are variable rather than invariable.

Here Aristotle relies implicitly upon validity of argument form to describe practical reasoning. Demonstration, which guides scientific knowledge, proceeds from invariable first principles (causes) though premises to conclusions. Since practical reasoning proceeds from variable (or uncertain) first principles, then the conclusions derived from uncertain premises will also be uncertain - "all such things might be actually otherwise" (NE 1140a35). If demonstration is not a practical option, then deliberation, the comparison, sharing and testing of hypotheses about possible action, must characterize the activity of practical reasoning. Kessels and Korthagen (1999) describe how

> good deliberation accommodates itself to what it finds, responsively, and
> with a respect for complexity. It does not assume that the form of the rule

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[3] "Deliberation about the invariant" is one of the key differences between the Aristotelian and modern conception of scientific knowledge – although modern scientific realists may still strive for

governs the appearances; it allows the appearance to govern themselves and to be normative for the correctness of the rule (Kessels and Korthagen, 1999 p.19).

Deliberation is the application of appropriate reason, through choice, to current situations. It is more sensitive to the particularity and complexity of situations, relying upon contrasting characterizations of the situation to discern a state of affairs.

Deliberation and choice, taken together, constitute the application and exercise of practical wisdom. Deliberation and choice are thus the bridge between *episteme* and action. Aristotle remarks that the "origin of action is choice," and that choice is "desire and reasoning with a view to an end" (NE 1139a32). Through choice, reason enters into action in the context of character, desire and situation. Choice is concerned with matching rules or guiding principles to the particulars of a given situation. Choice involves several cognitive components — intuition, understanding and judgment. Intuition is our ability to grasp rational principles, understanding our ability to possible applications to experience, and judgment our ability to characterize a given set of particulars with the appropriate set of principles. Together, the capacities for choice, intuition, understanding, and judgment form the building blocks for Aristotle's account of *phronesis*, or practical wisdom. *Phronesis* is thus our capacity for rational deliberation that results in effective action. It is our complex capacity to exercise these abilities in a coordinated fashion; our ability to make good choices, with good judgment, according to good principles, that result in good action. It is no wonder that *phronesis*, this complex mélange of capacities, has made a negligible contribution to contemporary research on practice – the necessary coordination of these abilities

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knowledge of the invariant that surpasses deliberation, scientific discourse is now (and, to be fair, was then) characterized by extensive deliberation about what is known.

together provides far too many opportunities for attributional error to provide a sound framework for hypothesis testing.

Aristotle explains that *phronesis* "must also recognize the particulars; for it is practical, and practice is concerned with particulars" (NE 1141b15). This emphasis on the particulars of experience insists that *phronesis* must encounter the "rough ground" (Dunne, 1992) of daily experience — it is not enough to merely know the right rule, one who has *phronesis* must also be able to apply it. Yet *phronesis* is not merely a knack for coming up with the right answer at the right time – it rises above *metis* through the stability it gains when informed by *episteme* and regulated through the habits of character. The stability of practical reason comes in part from the epistemic moral principles that guide action, and in part from the network of habits and virtues, developed through experience, that form character. Character, for Aristotle, in formed through experience as we attempt to live out and develop virtues over time. *Phronesis* necessarily involves both rule and character — without moral rules, it is merely *metis*; without character, it is no longer practical.

1.1.4 *Phronesis* : Praxis :: *Techne* : Poeisis

In the next section of Book VI, Aristotle attempts to distinguish between four related conceptions of how knowledge is brought to bear on practice.
Phronesis – the knowledge that guides action
Praxis (practice) – the action of doing things in the world
Techne (art) – accepted, traditional knowledge that guides the making of things
Poeisis – the action of making things
Here I want to argue for a complex interaction of these four ideas in the form of two arguments. Briefly stated, I will review Aristotle's argument that as *phronesis* is the knowledge that guides *praxis*, *techne* is the knowledge that guides *poeisis*. However, following Dunne (1992), I will also argue that since making is itself a kind of practice, *phronesis* acts as a kind of executive knowledge, determining not

only the practices of day to day life, but also acting as the director and evaluator of whether and when to apply technical knowledge in the course of practice.

The place of *phronesis* as a way of knowing and as a guide for action is framed by Aristotle's distinction between art (*techne*) and practice (*praxis*). Aristotle's account of reasoning about action concerning "the variable" includes both the action of making things (*poeisis*) and action of doing things (*praxis*) (NE 1140a36). Aristotle is careful to distinguish doing from making because, while doing can involve any action from deliberation to random reactions, the arts (*techne*) are well developed science-like bodies of knowledge, such as architecture and cooking, that guide the use of reason in *poeisis,* or making things. *Techne,* or "reasoned states of capacity to make," (NE 1140a37) have several *episteme*-like characteristics: they follow accepted practices, develop reproducible strategies, and offer the promise of predictable results. Cooking is a good example of a *techne*. If a cook follows a particular recipe, according to the appropriate specifications, then something like the anticipated cake should result. *Techne* is not *episteme* because the links between recipes and cakes are not as necessary as the links between theorems and triangles. Still, the goal of a *techne* is to make the "knowledge of things made" as epistemic as possible. The scientific era of modernity has made tremendous progress on imposing technical regularities on previously unordered processes. The systematic exposition of *techne* through repeated methodological trials, quasi-scientific hypothesis testing, and serious peer review of research findings has made engineering, culinary and business schools rivals of the core sciences in our time. There has, of course, been a substantial critique of this transition over the past century, beginning with Max Weber, on what William Barrett (1979) called the "illusion of technique," of what would be lost from human experience if we continue to push the promise that we may translate everything worth knowing into reproducible *techne*. In educational research, the move to fix the "knowledge of things made" into reproducible

techne, or techniques, continues in our efforts to build portable curricula and scalable policies.

Aristotle distinction between *praxis* and *techne* reveals his insight about the peril of reducing all knowledge that guides action into *techne*. *Praxis*, our ability to navigate everyday action in the face of the emergent and changing circumstances of life, points to a different kind of knowledge of which *techne* may be a part, but cannot be the whole. *Praxis* (which underlies our concept of practice) represents the conscious and unconscious patterns of how we negotiate and make sense of our world. For Aristotle, *praxis* is intimately related to character, virtue, and social life — it is the way we develop and live out our values in association with others. The consequences of practice serve to shape how our character is formed and the kinds of people we become. But *praxis* is neither blind nor instinctive, because the patterns of *praxis* result from learning and can be learned, *praxis* itself implies a certain kind of knowledge. While *praxis* is grounded in specific traditions of knowledge, it "is conduct in a public place with others in which a person…acts is such a way as to realize excellences that he has come to appreciate in his community as constitutive of a worthwhile way of life" (Dunne 1993, p. 10).

Phronesis, or practical wisdom, is Aristotle's term for the knowledge that guides *praxis*. *Phronesis* is the wisdom that guide practitioners through the unpredictability of predicting which events will occupy the day, the reactive adaptation to emerging crisis, and the ability to plan and evaluate successfully by marking and adhering to the regularities of the temporal and social context. Aristotle seeks to establish a conceptual proportion relating *techne* to *phronesis*:

$$\frac{\text{Techne}}{\text{Poeisis}} :: \frac{\text{Phronesis}}{\text{Praxis}}$$

Techne is the wisdom that guide poeisis, or making, just as phronesis is the wisdom that guides praxis. However, Dunne (1993) suggests that the relationship between techne and phronesis is more involved than this, for making is a form of practice (poeisis is a kind of praxis). Although techne and phronesis are set up to rule the separate domains of art and practice, Dunne suggests that there is a critical dependence of techne on phronesis implicit in Aristotle's account — phronesis underlies the appropriate use of any techne. As an executive faculty, phronesis sets the agenda with the identification of which aspects of the environment are worthy of action, and of the evaluation of such actions in relation to setting the course for future action. In this sense, phronesis in the practical manifestation of our ability to see a situation "as" a member of a certain class of similar situations. The appropriate use of techne depends upon the ability of phronesis to choose the time and place. Dunne describes phronesis as reason which has "developed an 'eye' (Aristotle) or a 'nose' (Wittgenstein) for what is salient in concrete situations" (Dunne, 1993 p. 368). Phronesis is the 'eye' of experience, which enables the practitioner to 'see aright' (NE 1143b13) — to identify the appropriate occasion and use of techne in the context of practice. The exercise of any techne depends upon someone who chooses this art rather than another, which problem is worth solving rather than any other. "The crucial thing about phronesis, however, is its attunement of the universal (epistemic) knowledge and the techniques (techne) to the particular occasion…" (Dunne, 1993 p. 368). The appropriate techne itself suggests the paths of possible problem resolution, but phronesis is the capacity to choose the techne and evaluate its result. Thus phronesis is the practical knowledge of which art to choose, how far and to what degree it should be applied, when it has sufficiently done its work, and according to which general moral principles should the work be judged. Although the standards of judgment are implicit in many techne, the decision to emphasize one

principle rather than another, to stress one aspect of the work rather than the many other characteristics, is the activity of phronesis.

1.1.5 Experience and the Good

The relation of *phronesis* to experience sheds further light on the relation of *phronesis* to *episteme* in practical matters. Aristotle contrasts practical wisdom both with people who know general, epistemic principles and those with practical experience:

> Nor is practical wisdom concerned with universals only-it must also recognize the particulars; for it is practical, and practice is concerned with particulars. This is why some who do not know, and especially those who have experience, are more practical than others who know (NE 1141b14).

People with experience may have develop deep, if fragmented, insights into the nature of complex practices, too subtle to be reflected by the glossy principles of *epistemic* knowledge. This distinction is reflected in intellectual domains, such as mathematics, that can be dominated by the young and inexperienced.

> What has been said is confirmed by the fact that while young men become geometricians and mathematicians and wise in matters like these, it is thought that a young man of practical wisdom cannot be found (NE 1142a11-13).

This is because mathematics is, in Aristotle's view, a form of purely epistemic knowledge "whose principles exist by abstraction" from experience. The encounter with particulars, embodied by experience, takes time and cannot be approximated by either epistemic coherence or intuition. Experience gives a sense of the constraints and limits of the practice, knowing the capabilities of the art, the uses for which it is and is not good.

> Therefore we ought to attend to the undemonstrated sayings and opinions of experienced and older people or of people of practical wisdom not less

than to demonstrations; for because experience has given them an eye
they see aright (NE 1143b12-13).

This is not to say, however, that experience is a sufficient condition for
phronesis. Experience alone result can result in cleverness, anticipating *metis*: For
Aristotle, cleverness "is…to be able to do the things that tend toward the mark we
have set for ourselves, then to hit it" (NE 1144a25). Aristotle's consideration of
cleverness is based on the kind of mark for which we aim. While we "call even
men of practical wisdom of practical wisdom clever," (NE 1144b2) the wisdom of
their action consists in the good toward which they aim, rather than their ability to
hit the target. For Aristotle, the good is a special form of *episteme* discerned by
moral intuition. *Phronesis* depends upon this moral vision to discern the good,
and because "the mark" (i.e. the good) is so difficult to maintain as an aspect of
virtue. Without an abiding sense of moral vision, of why the work is worth doing,
phronesis degenerates into mere cleverness, the ability to devise the means to
satisfy uncoordinated desires. While we may not share Aristotle's conviction
about a good that exists independent of our desires, we can readily find examples
of practitioners in complex practices, such as school leaders, whose work is
informed by the strong (and shared) conviction in doing right by the children in
their care. And although the present exposition of *phronesis* is not primarily an
opportunity for a consideration of the relation of moral principles to practice, the
analysis of the data presented in Chapter 3 may provide some insight into how
values are reflected in practice.

Thus Aristotelian *phronesis* is a complex cognitive ability, developed over
time through experience, that helps us apply epistemic rules appropriately amidst
the irregularities of experience. *Phronesis* rests on moral insight, or intuition, of
the epistemic goods worth pursuing in a given situation. It involves deliberation of
the appropriate means to fit a given situation, and is exercised through choice
informed by an understanding of the nature of a particular situation. The patterns

of *phronesis* in an individual are built up through the habits of character, which in turn are established and deepened as a result of experience. *Phronesis* is fleshed out by experience — knowing the rules alone, without the appropriate experience to guide their use, results in formulaic application rather than practical wisdom. The flexibility of knowing when to push and when to back off, of changing means, and of shifting goals is a characteristic of *phronesis*. Rather than an kind of wisdom complementary to *techne*, Dunne suggests that *phronesis* is a kind of executive function — choosing which *techne* to deploy and when, in the service of goals discerned through moral intuition.

To paraphrase Roy Pea's (1992) contention that the opposite of distributed intelligence is not distributed stupidity, the opposite of *phronesis* is not practical ineptitude. Although it seems that some practitioners seem to lack practical wisdom, *phronesis* stands as a type, rather than a threshold, of knowledge that is marked more by its presence than by its absence. While it takes *phronesis*, serendipity and sheer luck to make a complex system work, Aristotle's conception of *phronesis* is far too inexact to establish a claim that a dysfunctional system evidences of a lack of practical wisdom. The best we can hope for in Aristotle's account is to attempt to identify and represent examples of practical wisdom when we find them, attempt to communicate them with others, and hope that the lessons gleaned from one context of practice are transferable to another. To begin this task, I now turn to a consideration of the relation between learning and *phronesis*.

1.2 Learning *Phronesis*

Given Aristotle's distinction between *phronesis* and *episteme*, it is unlikely that we will ever develop a scientific, or quasi-scientific, account of practical wisdom. That is, we will not be able to develop accounts of *phronesis* that are true across contexts — for *phronesis*, the context of application in a particular situation, with particular people, always matters. Kessels and Korthagen (1996) note how Aristotle captures the distinction between *episteme* and *phronesis* in the contrast

between law and justice. While law is general, cases are particular. Since justice is the application of law to particular circumstance, sometimes the demands of justice go beyond the rules of law.

> The error is not in the law, nor in the legislator, but in the nature of the case, since the matter of the practical is essentially variable....The essential nature of equity is thus to correct the law in situations where it is defective on account of its generality (Kessels and Korthagen, 1996 p.20).

Determining the general principles of law can be an epistemic enterprise because law holds in all cases of a particular kind, while the application of law has to be catalogued on a case-by-case basis because the particulars of a situation always vary. The reason to develop a catalogue of examples of *phronesis* is not to develop a knowledge base in itself, similar to a body of scientific wisdom that stands independent of any particular use. Rather, *phronesis* is documented and catalogues primarily for pedagogical reasons, to instruct practitioners about he ways in which prior practitioners parse situations, come to decisions and enact judgments.

1.2.1 *Phronesis* and Casuistry

There have been significant precedents of the documentation of *phronesis* for instructional purposes. In *Abuse of Casuistry*, Jonsen and Toulmin (1988) describe the lost art of casuistry as a case-based documentation of prior judicial decisions that serve as guides for subsequent action. Casuistry is built on the notion that practical arguments:

> draw on the outcomes of previous experience, carrying over the procedures used to resolve earlier problems and reapplying them in new problematic situations ... the facts of the present case define the *grounds* on which any resolution must be based; the general considerations that carried weight in similar situations provide the *warrants* that help settle future cases...[and] so the resolution of any problem holds good

presumptively; its strength depends on the *similarities* between the present case and the precedents; and its soundness can be challenged in situations recognized as *exceptional* (Jonsen and Toulmin, 1988 p. 35).

Casuistry developed in the Middle Ages as a bridging practice to translate the decisions of canon law to application by local practitioners. This essentially pedagogical activity proceeds inductively from the particularities of a given case, rather than deductively from the implications of a set of laws. Casuistry became discredited as a viable practice in the early and mid 17th century as prominent critics, such as Blaise Pascal, charged that casuists manipulated the circumstances of any case to make certain that the appropriate laws would not apply, so that the accused would received a penalty that did not fit the crime. In other words, when the catalogues of the casuists began to take on legislative functions themselves – when designed precedents came to alter the nature and application of the laws they were intended to illustrate, casuistry fell into ill-repute. The fate of casuistry reminds us that a documentation of *phronesis* ought to supplement, not supplant, epistemic investigations. In the case of school leadership, we still need to know about the effects of policies and program, the general characteristics of schools, and the types of leadership that are correlated to school achievement. But we also need to know, *for the purpose of instruction for potential leaders*, how these ideas, policies and data are interwoven to constitute good practice While documenting and communicating *phronesis* should not replace epistemic research, any attempt to teach *phronesis* must go beyond epistemic to practical wisdom.

1.2.2 *Phronesis* and Apprenticeship

Understanding how complex practices unfold reveals the inherent dependence of *techne* on *phronesis*. Apprentices, under the executive direction of masters, develop *phronesis* by trying out various *techne* to understand not only how the arts work, but what they are good for and the range of their application (c.f. Lave 1988). Collins, Brown and Newman's (1989) account of cognitive

apprenticeship attempts to refine the learning of traditional apprenticeship arrangements through problem formation, task selection and scaffolded support.. Cognitive apprenticeships have the most promise in the context of a classrooms designed to teach certain skills to captive students. Traditional apprenticeship relationships are less direct, more messy and more expensive than cognitive apprenticeships. Apprenticeships, mentoring, and peripheral participation forms much of the core of how teachers (and, I would suggest, school leaders) learn about much of their practice. This haphazard, but powerful combination of learned experiences has all of the advantages and the disadvantages of the self-educated man — what he knows, he may know deeply and surely, but what he does not know, he may suspect and disregard. Here I argue that individual *phronesis* also carries this fragmented, haphazard quality. Practical wisdom is a crazy quilt, or *bricolage* (c.f. Levi-Strauss, 1965) of precedent successful and unsuccessful experiences that are assembled, remembered and applied tacitly in the course of daily practice. Knowing how to teach, for example, suggests that the bricolage of practical wisdom comes from myriad sources quite difficult to trace. Philip Jackson (1986) suggest that:

> Teaching, as we all discover while very young, is not confined to schools.
> We encounter it in all kinds of settings—at home, on the street, in
> churches and synagogues, in doctors' offices and on playgrounds...As a
> consequence, our cumulative knowledge of what it takes to be a teacher is
> derived from many different kinds of experiences with teachers of many
> different sorts….For most people in today's world, that glimpse, (into the
> world of teaching practice) repeated again and again for years on end, is
> sufficient to engender and sustain strong and enduring beliefs about
> teachers and their work (Jackson, 1986 p.2).

This pervasive exposure to teachers and teaching makes it very difficult to construct a targeted cognitive apprenticeship model of teaching because the slate

of prior, tacit assumptions about teaching and learning is, for most of us, already so filled. The inertia of past practices colors efforts to learn anew. Jackson also comments that a good way to understand these influences is to ask teachers about how they remember their significant teachers (1986, p. 66). These reconstructed stories point to the ways that significant details of prior experience, both good and bad, stick out and serve as coat hangers, as it were, upon which subsequent experiences can be hung. For many teachers, these memory networks serve as frameworks to organize the *phronesis* of their teaching. Accessing the *phronesis* implicit in the bricolage is more than identifying the sources of the particular bricolage features. Rather, *phronesis* lives in how the network functions over time in the face of the challenges of practice. In Chapter 2, I will offer an account of how designed artifacts can serve a similar function to Jackson's accounts of significant teachers, and can open a window to shed light on how (and where) *phronesis* lives in bricolage of leadership practice.

1.2.3 *Phronesis* and Reflective Practice

Aristotle notes that experience with the *techne* of a complex practice alone is insufficient to develop *phronesis*. Developing *phronesis* is not the same thing as becoming a highly skilled practitioner –experience can help us understand and undertake difficult tasks, but *phronesis* lies in the ability to articulate and tell others about how the tasks were undertaken. *Phronesis* develops by reflecting on the exercise of *techne*. This raises an interesting question about the nature of unarticulated *phronesis*. Polanyi (1958) suggests most of our action is guided by forms of knowledge that remain inarticulate. Bourdieu (1990) goes so far to say that the logic which guides practice, because it is exhausted in action, is necessarily inarticulate, and cannot be brought to the light of day without significant transformation. I suggests that the difference between successful practice and *phronesis* is the ability to render an account of the tacit assumptions that guide action *for the purpose of teaching about the practice to others*.

Conceding Bourdieu's point, we cannot hope to adequately uncover the reasons that guide practice either before the practice (who knows which reasons will be brought into play?) during practice (too busy!), or after practice (on the perils of retrospective reconstructions, see Garfinkel, 1967). However, we can make an effort to determine whether articulations of *phronesis* make sense as feasible patterns of though both to the practitioners whose practice is being reconstructed, and to similarly situated practitioners involved in related tasks. The proof of the quality of the account is determined by the ability of similarly situated practitioners to follow the account, and to decide whether the account makes sense to similarly situated practitioners. Is there too much detail that submerges the train of thought? Too little context so that the account is too abstract? Too focused on the characteristics of the practitioners themselves? The validity of an account of *phronesis* is determined as much by whether it makes sense to others as by whether the story recapitulates what actually happened.

Articulated *phronesis* thus serves not only as an account of the thinking that goes into successful practice, but equally as a guide for interested others to use in making sense of and guiding their own practice. Research on *phronesis* attempts to create narratives of practice that serve as occasions for reflection. Reflection on practice is a key step in developing *phronesis* in both apprentices and experts (c.f. Schön 1983). As experience with the relevant *techne* increases, reflective novices can come to understand that no *techne* is an end in itself, rather that all arts are means to serve ends outside their scope. For beginning teachers, getting through the textbook/curriculum/unit can be an end in itself, but upon reflection, this is a relevant activity only if it successfully advances the learning of students. Similarly, for beginning school leaders, teacher observation procedures can be understood as necessary constraints on action, as ends in themselves. Upon reflection, the teacher observation can come to be seen as a way to provide formative as well as summative feedback to teachers, and can be designed to serve

as the backbone of a coherent professional development program. Reflective practice is vital for developing *phronesis* in experienced practitioners as well. Talking through the assumptions, problem formulations and proposed solutions of experienced practitioners has proven a valuable way to elicit *phronesis* (Schön 1983, 1987; Reflective Turn, 1993; Fenstermacher and Richardson, 1993).Working through the twists and turns of how and why *techne* are applied helps practitioners to understand from within, the limits, constraints, and affordances of the techniques. This is why it is vital to have experienced practitioners to reflecting upon relevant *techne* in educational setting — an *epistemic* grasp of the goals of the *techne* alone, no matter how reflective, does little to build *phronesis*. Much of instructional leadership, whether in a school or any other educational relationship, consists of providing the opportunity for those engaged in *techne* to reflect on their work — developing *phronesis* by testing the affordances of the *techne* against their beliefs and values about the work that is worth doing.

1.2.4 *Phronesis* and Practical Argument

Aristotle's account of practical wisdom has been appropriated by several recent research efforts in the form of *practical arguments*. In a recent application of practical wisdom in the context of teaching and learning, Fenstermacher and Richardson (1993) have developed the method of practical argument as a way to spark the process of reflective practice. While claiming that practical reasoning is difficult to capture, they develop the practical argument as a means to elicit the thinking that goes into complex practices.

> Practical reasoning describes the more general and inclusive activities of thinking, forming intentions, and acting, while practical argument is the formal elaboration of practical reasoning (Fenstermacher and Richardson, 1993 p.103).

Practical argument is based on the quasi-Aristotelian device of the practical syllogism.[4] The Aristotelian logic developed in the *Prior* and *Posterior Analytics* proceeds in the form of the syllogism.. A syllogism has three basic parts: 1) a major premise, which contains a statement of an appropriate universal rule; 2) a minor premise, which contains particular instance of the rule, and 3) a conclusion, which connects the universal to the particular instance. The classic example of a syllogism is:

All men are mortal;

Socrates is a man;

Therefore Socrates is mortal.

In structure, both scientific and practical knowledge have a similar syllogistic structure, each proceeds from major and minor premises to conclusions. However, whereas the scientific syllogism concludes in a proposition, the practical syllogism results in an action. The ability to successfully implement the practical syllogism leads Aristotle from practical knowledge (which informs the construction of a particular syllogism) to practical wisdom, or *phronesis*, which turns out to be "a reasoned and true *state or capacity* to act with regard to human goods" (italics mine) (NE 1140b20). Thus Aristotle does not attribute *phronesis* to people who are either good at thinking or talking about leadership, or those who successfully complete particular acts of leadership in isolation. Good leaders are people who are good at leading over time. The link between reasoning and action is critical in considering *phronesis*. As a research model, it is not enough to get a summary

[4] The practical syllogism is often attributed to Aristotle in connection with his discussion of *phronesis* in Book 6 of the Nicomachean Ethics. But Aristotle never explicitly connects *phronesis* with a syllogistic process – the closest the text comes to a connection is the brief syllogism about how light meats are wholesome at NE 1141b18. (Noel, 1997) Aristotle earlier takes some pain to distinguish *episteme* from *phronesis* by contrasting epistemic demonstration (which proceeds by syllogism) from the deliberation of *phronesis* (which proceeds by comparison and contrast), making it unlikely the practical syllogism would be considered the heart of *phronesis*. The

about what a practitioner was thinking during the course of action -- this *post facto* reconstruction may represent a practical argument but is not *phronesis*.

Fenstermacher and Richardson do not claim to *capture* practical reasoning as much as to *evoke* it in practitioners. They note that "practical arguments are *ad hoc* examinations of actions" (p. 104) emphasizing that, although *phronesis* is important to understand the intentions behind practice, these intentions are largely tacit and unavailable to either researchers or practitioners. *Phronesis* suggests that making explicit the tacit network of values, habits and practices that guide action is not an end in itself. The cycle of *phronesis* is only complete if it results in an opportunity to reflect upon and alter practice. Fenstermacher and Richardson claim that the elicitation and reconstruction of practical arguments "offers a way to participate in the education of educators that reflects the way we believe educators should participate in the education of learners" (p. 104). For Fenstermacher and Richardson, practical arguments provide a template for eliciting both the materials and the techniques of teacher education. In later chapters, I will argue that there are other methods to draw out *phronesis*, going beyond interviews designed to draw out practical argument, that can serve as cornerstones for a new vision of how to teach about complex practices.

Thus in a critical way, the accessing, documenting and representation of *phronesis* serves not an *epistemic,* but a *pedagogical* purpose. Research about *phronesis* exists so that practice can be communicated to other practitioners – as an end in itself, a body of *phronetic* knowledge (disconnected from context and transformed into *episteme*) is lifeless and useless. The challenge for a research project dedicated to *phronesis* is to uncover the rhythms of the practices of interested practitioners, represent those practices in ways that are accessible to other practitioners, and to develop better ways to communicate good practice.

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subsequent development of the practical syllogism as the rational engine of *phronesis* reached in Aquinas' consideration of *phronesis* as prudence in the Summa Theologica (II-II 48,1)

Any representation of *phronesis* must include account of the context as well. The problem is one of how to represent this context. Too much detail obscures the wisdom, too little abstracts it. The challenges is to capture the right level of context that evokes an awareness in another practitioner of similarity in cases. There is only so much that can be written about a wisdom of practice. In order to learn about *phronesis*, we must be able to see it in action. I now turn to a consideration of the kinds of *phronesis* we will see in action: the instructional leadership practices of school leaders.

1.3 *Phronesis* and Leadership

While the main discussion of *phronesis* is concerned with the direction of an individual life, Aristotle makes it clear that *phronesis* also applies to the direction of community life. His initial discussion of *phronesis* is in terms of an individual's ability to "deliberate well about what is good and expedient" (NE 1140b25). However, in articulating the nature of *phronesis*, he draws a connection between *phronesis* as exercised in care of the individual and in care of the state. Aristotle comments that:

> (i)t is for this reason that we think Pericles and men like him have practical wisdom, viz. because they can see what is good for themselves and what is good for men in general; we consider that those can do this who are good at managing households or states (NE 1140b9).

Aristotle contends that practical and political wisdom are closely related, but not identical. "Political wisdom and practical wisdom are the same state of mind, but their essence is not the same" (NE 1141a23). By this Aristotle means that practical and political wisdom share the same deliberative process, but differ in their domains of exercise. Practical wisdom is concerned with the good of the individual, and political wisdom with the good of the state. Aristotle notes the different dimensions of political wisdom: "one is called household management, another legislation, the third politics, and of the latter on part is called deliberative

and the other judicial" (NE 1141b31). The ability to successfully conduct
legislation and politics is the work of the statesman, or the leader, and requires the
exercise of political wisdom. Under the heading of practical wisdom, Aristotle
thus distinguishes between personal practical wisdom and political practical
wisdom. For the remainder of this account, I will use the term *phronesis* to refer
mainly to political practical wisdom, and the *phronesis* of school leadership will
refer to the practical wisdom exercised by leaders in guiding the school.
Aristotle's comments about statesmanship and political wisdom focus mainly on
the genesis and constitution of the state. There are few accounts offered in
Aristotle's work of organizations apart from the state — for the most part, he
equates leadership with statesmanship.[5] Here I will expand upon Aristotle's
consideration of political statesmanship to consider the *phronesis* of leadership as
the ability to "deliberate well about what is good and expedient" for any
organization. This balance between seeking both what is good and what is
expedient is captured in Burns (1978) distinction between transactional and
transformational leadership. Transactional leadership consists mainly in the
distribution of goods and services within an organization to maintain an
equilibrium among the competing goals and needs of participants.
Transformational leadership is the ability of leaders to alter the organization
toward the selection of new goals, and the ability to influence participants to
accept and work toward these new goals. Although Burns claims that these

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[5] In *Politics*, Aristotle offers an account of the genesis of the state grounded in an account of
household economy. In this he disagrees with Plato's notion, offered in the *Republic*, that the ideal
state ought to be established on the abolition of the nuclear family (*Politics* 1262a-b). Grounding
political order in the ability to manage a household preserves a sense of continuity in the account of
political wisdom – the process that guides the exercise of wisdom is similar, even though the
domain of exercise differs. In the home, the community and the state, leaders must be able to
balance the goods desires by individual members with the good of the community as a whole, and
to devise the appropriate means to preserve the balance and move toward the satisfaction of these
often mutually conflicting goods. As personal *phronesis* attempts this balance in the individual, the
phronesis of leadership attempts this balance in the state.

provide competing conceptions of leadership, Cuban (1988) claims that there exists a much more complementary relation between transactional and transformational leadership. Good leaders must have a sense of the transactional context of their organizations in order to be able to successfully engage in transformational leadership practices. Even if successful, transformational leadership requires the transactional ability to maintain a new status quo, acquiring and re-distributing resources to meet the needs of the new organizational order.

The *phronesis* of leadership practice is the wisdom that guides how leaders construct and maintain structures that help them negotiate this context of completing, pre-existing goals and emergent situations. Mere transactional competence is not sufficient, however, for an account of *phronesis*. Transactional competence alone is too closely related to *metis,* or cunning, to qualify as *phronesis*. Without a sense of the good toward which action aims, and the ability to reflect a sense of the good in everyday actions, transactional leadership is mere *metis*. Aristotle's account of the distinction between *techne* and *phronesis* is useful here. Actors use *techne* to create particular kinds of products in the world. Artifacts such as organizational structures, work-day schedules, or compensation incentive systems, are products of *techne*. However well constructed, such artifacts are liable to misuse and misinterpretation once implemented in the context of practice. Recent implementation and design literature (e.g. Tenner, 2000; Cuban, 1990) is replete with references to products which, however well-designed or intentioned, either failed to achieve their goals, or worse, achieved exactly the opposite goals they intended to address. *Phronesis* is the ability of leaders to guide and shape the use of artifacts toward intended goals.

We have already seen why the *phronesis* of leadership is not a science.[6] Now we can see also why leadership is more than an art. While *techne* is the ability to

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[6] Aristotle's distinction between the activities which lead to *episteme* and *phronesis* corresponds to a distinction between research and practice. The aim of a research is to produce the kind of

construct such artifacts well, *phronesis* is the ability to guide their use toward the good of the community, and to adjust usage and implementation in the light of context and circumstance. The *phronesis* of leadership does not exclude *techne*, rather, it reflects the wisdom of deciding which *techne* to use, and to understand and adjust how the resultant products will be used to achieve an overall sense of the good of the community. If leadership is merely an art, then it does not involve *phronesis*. The practical wisdom of leadership, because it is exercised in an uncertain field with emergent, unanticipated characteristics, must draw upon both science and art in the execution of its tasks. But in itself, *phronesis* is neither science nor art.

1.3.1 Distributed Cognition and Leadership[7]

Knowing what to do is insufficient for practical wisdom – one must also be able to get it done. Knowing how to do the good for the community, as with individual practical wisdom, requires "knowledge of the particular" of action in order to be successful (NE 1142a20). What does this "knowledge of the particular" mean for the *phronesis* of leadership? Once the transition is made from an *epistemic* to a *phronetic* account of practice, the context becomes a key constitutive feature of the practice.

Navigating the particulars of the context, knowing how to emphasize certain features while overlooking or ignoring others, requires an account of political *phronesis* to reach beyond individual cognition to embrace the social and situational distribution of cognition. Recent research in social and cognitive psychology points the way toward how to think about "knowing the particular" in relation to *phronesis*. Agre (1999) suggests that cognition is not a one-way process

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knowledge, *episteme*, that transcends the particulars of time and place. The aim of practice is to use knowledge to negotiate the particularity of time and place, *phronesis*. While research begins with particulates, it ends in generalizations. *Phronesis* begins and ends with the particulars of practice.

[7] Aspects of this section of the argument have appeared in Spillane, Halverson & Diamond, (2001).

of developing and applying of cognitive schema to a changing world. Agre notes that:

> Everyday life has an orderliness, a coherence and patterns of change that are emergent attributes of people's interactions with their worlds. Forms of activity might be influenced by (cognitive) representations, but are by no means mechanically determined by them (Agre, 1999 p. 7).

Agre proposes interactionism as an alternative metaphor to the mentalist metaphor that attempts to "reproduce the entire world inside the head" (p. 51). Interactionism recognizes the individual and the environment as different things, but suggests that "it is impossible to understand them as 'participants' in a third figurative thing, namely the interaction" (p. 53). Agre's metaphor suggests that practice is a much more interactive process, where the symbolic and artificial features of the world come to constitute our thinking and acting such that any account that focuses exclusively on individual cognition will fall short. Recent work in cognitive and social psychology describes how a complementary gradation may exist in *possession* of *phronesis* between the individual and the community, suggesting that individual cognition cannot be understood merely as a function of mental capacity because sense-making is enabled (and constrained) by the situation in which it takes place (Resnick, 1991).[8]

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[8] This raises an interesting question about the pervasiveness of practical wisdom. Since all practitioners frame and solve problems, practical wisdom must exist in all situations, and if so pervasive, then what will be wise about it? Wisdom implies a sense of exclusiveness, or opposition, to ignorant practice. As stated above (p. 46), Pea (1992) rejects the notion that distributed "foolishness" or "stupidity" are antonyms of distributed intelligence. Accepting ignorance as an antonym to intelligence , claims Pea, suggests that intelligence is an abstract quality that exists apart from its exercise, and whose absence can be noticed as a normative judgment of resulting action. Instead, Pea suggests that "activity is achieved in means-ends adaptations" (p. 50) Such adaptations, according to Pea, may be more or less successful, that is, the selection of a particular means may be more or less successful for achieving a desired end. If the desired end, for example, is establishing an instructional program that raises student test scores across the school , there will apparently be means that are more or less successful to achieve this end. This does not suggest that less successful means are inspired by foolishness, rather it suggests that there are many ways of achieving the desired end, some more suited to certain circumstances

1.3.1.1 Communities as Individuals Writ Large

With regard to leadership, Aristotle suggests that "one's own good cannot exist without household management, nor without a form of government" (1142b9). The distinction between political and personal *phronesis* allows us to consider the community as a unit of analysis for leadership just as the individual is the unit of analysis for morality. Just as the good of the individual is the goal of personal *phronesis*, the good of the community is the goal of a political *phronesis*. However, the sense of agency changes in the transition from the personal to the political. It is somewhat of a simplification to suggest that there is a monolithic individual that guides action in personal *phronesis*. Rather, the various aspirations, needs, desires and limitations of the individual compete for the ability to determine the course of individual action. What is the analogue for this multiplicity of conflicting interests in the community?

An extension of the unit of analysis from the individual to the community echoes the analogy between the structure of the soul and the structure of the state in the *Republic*. In Book II, Socrates is challenged to offer an account of how justice is both desirable for its own good as well as for its effects. As a way to begin his answer, Socrates establishes an analogy between the state and the soul, in which state is the soul writ large. Finding justice in the state will allow him to consider the nature of justice in the soul. Distributed cognition theory operationalizes this metaphor of the individual "writ large." For example, Hutchins

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than others. *Phronesis* is the ability to size up a situation and select the appropriate means for the given end, and since the ends are usually in flux, the selection of means is usually an uncertain enterprise. This research focuses not on the quality of the established solutions, but on presenting successful problem-solving and setting practices in ways that similarly motivated practitioners might utilize in their own work. While the very selection of one case, one set of means, over another suggests an implicit judgment about the quality of the means represented here, the motive is not to praise this set of practices over another, but to establish a template to represent a wide variety of possible practices that could be utilized in a variety of situations. In this sense, practical wisdom has no opposite, but certain patterns in the selection of means will have greater affinity with similarly situated practitioners. One of the long-term aims of this research is to develop principled methods to evoke and analyze the range of these affinities.

(1995) makes a similar analogical move in his consideration of complex situations of practice. Traditional cognitive analyses, according to Hutchins, are concerned "with the nature of knowledge structures and the processes that operate on them" (Hutchins, 1995 p. 266). Hutchins claims that understanding how plane speed is regulated involves more than untangling the cognitive processes of pilots, it also involves how the task of speed regulation is constituted by the artifacts that support practice. In order to get at this larger unit of analysis, Hutchins claims that "one can still ask the same questions of a larger, socio-technical system that one would ask of an individual" (p. 266). Looking at the cognitive properties of this larger system has a distinct advantage over considering individual cognition:

> With the new unit of analysis, many of the representations can be observed directly, so in some respects, this may be a much easier task than trying to determine the processes internal to the individual that account for the individual's behavior. Posing questions in this way reveals how systems that are larger than an individual may have cognitive properties in their own right that cannot be reduced to the cognitive properties of individual persons (Hutchins, 1995 p. 266).

Hutchins' analyses of how a cockpit remembers its speed (1996), how ship navigates a tricky harbor without key navigational aids (1995), and how Micronesian navigators used the night sky as a sophisticated navigation system (1995), all rely upon the identification and documentation of the both the key tasks and key artifacts involved in the studied practice.

1.3.1.2 Social Distribution

Once the relevant tasks have been identified, a distributed cognition framework can be used to investigate how the task enactment relies upon social and situational networks for enactment. *Social distribution* of task enactment begins with the a simple division of labor, but develops into more complex

patterns of co-enactment and coordination distributed both synchronously and asynchronously among varied practitioners. For example, in his analysis of how a ship is guided into a port with disabled navigational gear (1995), Hutchins highlights how labor is divided between map readers, navigators, and seamen who collect relevant navigation data. The information collection and distribution processes are distributed among the crew, as some collect and document ship position, some relay information to the navigation crew, some correlate the data with detailed navigation maps, and still others interpret the information to relay navigational directions to the captain. While the labor is divided among the crew, the task of navigation itself cannot be reduced to a more atomic level of analysis — the task as completed is constructed by the social interaction and information sharing of the crew.

1.3.1.3 Situational Distribution

The analysis of the social distribution of task enactment highlights a second key dimension of distribution: the *situational distribution* of practice. In a general sense, the situation can be understood as a context for task enactment, as the ground for the figure of practice. But viewing situation as mere backdrop overlooks how integral the given situation is for particular task-enactments. Wertsch (1998) suggests that we think of how the situation constitutes practice through the concept of *mediational means*. Wertsch describes an "irreducible tension" between agency and mediational means, and suggests that accounts that separate agency from means miss the coherence of activity (1998, p. 23-26). Examples of "mediational means" include designed artifacts, languages, number systems, and interpretive schema that enable and constitute intelligent social activity. Practitioners rely upon these means as a way to draw upon and situate action within cultural, social, and historical norms. The metaphor of design sheds some light on the nature and use of mediational means. Designed artifacts are

inscribed with certain uses, intentions and functions that guide use in practice. These inscriptions are more difficult to discern in widely used abstract symbols systems such as languages and numbers, but relatively easy to identify in designed artifacts such as refrigerators and protractors.

When considered as mediational means, designed artifacts facilitate an asynchronous communication of intentions and functions to future users over time. Hutchins (1995) highlights this constitutive aspect of *cognitive artifacts*, such as airplane instrumentation, that off-load and refine information processing tasks, enabling practitioners to focus attention on discretionary and judgment tasks. Other designed artifacts aid cognitive processing by constraining and affording practical options. For example, in school settings, practical options are often constrained by artifacts such as district policies, daily schedules, teacher contracts and available instructional media. Gibson's (1979) concept of affordances pushes

Figure 1   Engestrom's Activity Triangle (1987; 1996)
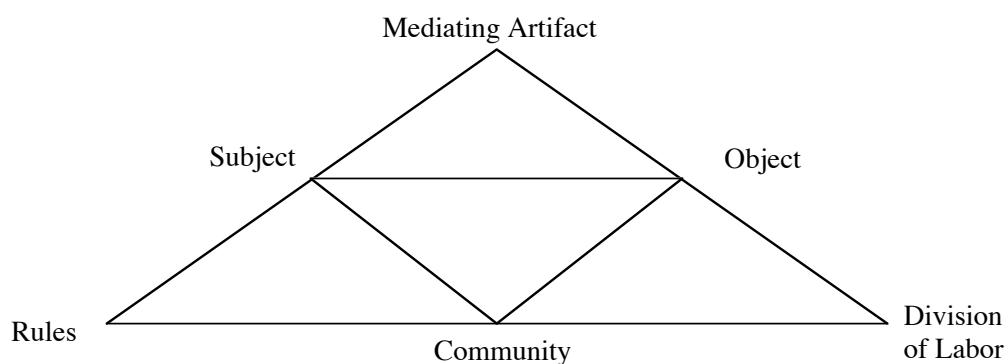
us to consider how artifacts, either intelligently used or implicitly in their design, make certain kinds of practice possible. Artifact affordances might result from designer intention, such as a well-designed curriculum that helps interested teachers structure student inquiry. But artifacts might also afford certain kinds of practice unanticipated by the original designers. For example, a district-wide initiative to provide resources to reform literacy instruction may afford the

development of a strong backlash to the new practices among over-burdened
teachers who feel that the new practices do not fit in with current instructional
priorities. In such cases, the resources that go along with the initiative may be
stripped off and adapted to another project, acting as an indirect affordance for the
alternative project. As I will argue later, the wisdom of leadership practice
consists in part in the ability to recognize the affordances of artifacts where others
see constraints, and to exploit these affordances to successful realize instructional
goals.

1.3.1.4 Activity Systems

Taken together, this network of socially and situationally distributed tasks
form an activity system (Cole and Engeström, 1993; Leont'ev, 1978; Lave, 1988;
Engeström, 1996). Activity systems are theoretical frameworks designed to reveal
how the relevant aspects of the situation constitute practice. As Engeström (1996)
describes:

> For activity theory, context are neither containers nor situationally created
> experiential spaces. Contexts are activity systems. An activity system
> integrates the subject, the object and the instruments (material tools as
> well as signs and symbols) into a unified whole (Engeström, 1996 p. 67).

Engeström uses a nested triangle model to represent an activity system (Fig 1).
The vertices of the inner triangle designate the *subject*(s) whose perspective is
represented in the practice in question, the *object* or outcome of the practice, and
the *community* who share this object with the subject.   The vertices of the outer
triangle designate the means that mediate the interaction of the inner vertices.
Tools, or designed artifacts, allow the subjects to reach their objects through
production; a *division of labor* allows the community to participate in the object
through the distribution of tasks and resources, and *rules* govern the interaction of
the subject with the community through means of exchange. This representation

of the activity system is like a snapshot of the context which constitutes action - over time, the vertices of the triangles develop as the activity system acquires a sedimentary history of prior practices which come to shape the possibilities for future activity.

The description and analysis of activity systems can be used in several ways to investigate practice. One way is to offer a critical account of how the historicity embedded in existing practice points toward ways in which institutional assumptions and policies create the discontinuities and problems inherent in current practices (e.g. Engeström, 1996; Cole and Engeström, 1993; Mehan, 1996). A broad theme of much education research (e.g. TIMMS report for international comparisons of American schools, Cuban on the reasons why innovations fail, 1982 report on the failure of American Education) seems to adopt a critical, rather than a descriptive, approach to existing educational practice in seeking to identify the inadequacy of current practice, and why efforts to reform practice fail, rather than investigating and documenting the nature of current successful practices.

In his distributed cognition research, Hutchins (1993, 1995, 1996) seems to take another approach, a more descriptive tack on considering activity in context, seeking to untangle, rather than critique, the flow of existing practice through the interaction of actors, artifacts, goals and routines. The accounts of *phronesis* offered here will seek to follow a more descriptive, and less critical line of inquiry. Instead of focusing on what does not work, I will focus on how things *do* seem to work in schools in order to uncover the practical wisdom implicit in existing practices. In considering how policies are implemented in schools, McLaughlin (1987) suggests the existence "implementing systems" in schools which enable and/or constrain the ability to alter existing practices in the face of instructional initiatives. McLaughlin describes "the supports, incentives and constraints that influence implementers reside in the broader system" (p. 175). I argue that we do

not have a sufficient grasp of the nature of local implementing systems in particular schools, and that a primary goal of this research is to give shape to a method that will help make such implementing systems visible for researchers and for practitioners. Articulating the tasks involved in the local implementation of initiatives, and tracking the development of tasks through local activity systems, will help us understand the micro-level of how (and then, maybe, whether) changes are effected in schools.

1.3.1.5 The Distributed Leadership Framework

The distributed leadership framework (Spillane, Halverson and Diamond, 2001) points toward how a Hutchins-like analysis can be used to disclose the *phronesis* of leadership practice within the implementation systems of schools. Like Hutchins, the analysis of distributed leadership practice begins with the identification and documentation of the tasks that constitute leadership, and moves from the tasks to consider the social and situational constructs that support and constitute task enactment. Tasks, the basic building blocks of practice, can unfold on several levels. The local, day-to-day unfolding of instructional work, such as dealing with student problems and faculty requests, submitting paperwork, and evaluating lesson plans, for a rich network of *micro-tasks* that constitute the practice of school leadership. On another level, there are organization-level, or *macro-tasks*, that guide and inform daily activity. For school leaders, these macro-tasks include the supervision and evaluation of instruction, monitoring current organizational goals, establish an instructional vision, resource acquisition and allocation, and establishing compliance with existing policies and institutional traditions. Understanding the *phronesis* of leadership consists in tracing the connections between these micro- and macro-tasks, in accessing and documenting the ways in which the connection between micro- and macro-tasks makes sense to practitioners.

The distributed perspective on leadership also recognizes the two key dimensions along which leadership practice makes sense: social and situational distribution. The social distribution of leadership practice refers to the ways that formal and informal leaders co-construct and execute leadership tasks, and focuses on the means through which leaders make sense of their work in light of the relevant macro-tasks. Analysis of the social distribution of leadership practice has revealed how leaders construct and co-construct tasks around subject matter (Burch, Spillane, Diamond and Jita, 2001), how school leaders implement accountability policies (Spillane, Diamond, Burch, Hallett, Jita, and Zoltners, 2000), and how knowledge is distributed among elementary school leaders (Spillane, Coldren, and Diamond, 2001). The situational distribution of leadership reveals how relevant artifacts, both received and locally designed, come to constitute leadership practice. These artifacts range from district policies to school calendars, from memos to classroom observation forms. The interactionist focus of the situated perspective on leadership recognizes that artifacts are not merely used by actors, but come to frame and compose the daily work in schools. Considering artifact use in schools, conversely, will shed considerable light on the patterns of the ways school leaders think about and enact their work. Locally designed artifacts are a particularly promising avenue into understanding because they document the process through which local school leaders come to understand and address emergent problems. As I will develop below, (Chapters 2 and 3) locally designed artifacts can provide an analogue in schools for how archeological artifacts help researchers reconstruct ways of life.

Perkins (1992) presents a "person-plus" model of distributed cognition, suggesting that, while task-enabling knowledge is certainly embedded in the contexts of action, there are some "higher-order" cognitive processes, such as discernment and judgment, that are retained by the agent in action. *Phronesis* provides an interesting way to think about this network of higher-order processes.

While knowledge can be represented and accessed in the situation and in the social network, it takes practical wisdom to be able to identify resources as appropriate, mobilize situational knowledge into usable forms, and to decide the appropriate time and place for action. *Phronesis*, in this light, is the ability to engage with, judge, and act upon social and situational task-networks; enabling wise actors to exploit and configure the distribution of knowledge to achieve the task at hand. Through experience, *phronesis* is formed through familiarity and use of distributed task networks, and comes to take shape as a result of participation in specific social and situational networks. If *phronesis* represents the contribution of the "person" in Perkins' "person-plus" formulation, then we should be able to turn the framework around and investigate the nature of wisdom in the "person" through examining the design and use of the "plus." I will rely on the situational distribution of leadership framework, in particular, to draw out the nature of *phronesis* by a close examination of how artifacts are designed and used in work contexts.

1.3.2 Instructional Leadership

Instructional leadership forms a special case of leadership is schools. Instructional leaders seek to establish the conditions for the possibility of successful teaching and learning in schools. As is clear from our experience in schools, the task-network that constitutes instructional leadership is particular schools is not easy to access or articulate. David Cohen (1988). suggests that the problems inherent in engaging in ambitious instruction in schools are not mere external constraints, but built into the problematic nature of schooling itself. Cohen suggests that ambitious instruction, which challenges students and teachers to take risks and reach beyond what they know, is really a form of centralized group therapy with an overburdened therapist and all-too-often unwilling patients. The therapeutic relationship is difficult enough to maintain with qualified doctors and individual, willing, patients. When stretched to a school scale, both teachers

and students come to make implicit agreements about instruction, teachers to give appropriate rewards and not push too hard, students to give token effort and not behave too badly. The intractability of the problem is built into the way schools work, and exceptional teachers and students will sometimes be able to transcend the very constraints that hold back the great majority of school folk.

The ability to engage in ambitious instruction across a school clearly requires some alleviation and support for these constraining conditions. For ambitious teaching and learning to take root across a school, teachers and leaders must work together to understand the constraints that bind, and together to deconstruct and rebuild structures that afford the kinds of instruction desired. Cohen's admonition about the entrenched, problematic nature of the teaching enterprise in mind suggest that this process of deconstruction and rebuilding is a time-consuming and uphill task. Hallinger's (1992) account of the evolution of educational leadership over the past century echoes, over time, an appreciation of Cohen's problematized conception of teaching and learning. Hallinger describes how the predominant conceptions of school leadership over the past century had evolved from manager, to instructional leader, to transformational leader. A managerial perspective on leadership suggests that leadership is simply a matter of maintaining an active system, of providing adequate motivations to ensure the stability and functionality of the status quo. Burns (1978) called this transactional leadership, the ability to provide appropriate rewards that motivate workers to continue to do their jobs. When change was necessary, Hallinger comments that the principals role was "limited to managing the implementation" (Hallinger, 1992 p. 36) of a new program, of fitting the requirements of the new program into the established regularity of the old. As the 80s brought a stronger push for student achievement, school leaders were encouraged to provide instructional leadership in the form of direct intervention in the teaching and learning processes and "focusing staff attention on student outcomes" (p. 36).The principal was asked to

be more of a lead teacher than a manager, asked to provide expertise on the processes of teaching and learning as well as the ability to maintain a stable school environment.

Transformational leadership (c.f. Burns, 1978; Leithwood, 1994) emerged in the 90s as a complement to instructional leadership, grounded in the recognition that changing a complex school system is more than a matter of direct intervention in the instructional process. Bennus and Nanus (1985) claim that transformational leaders are "able to shape and elevate the motives of followers," and that transformational leadership is "collective, (it creates) is a symbolic relationship between leaders and followers" (Bennus and Nanus, 1985 p. 78-79). Successful school restructuring requires leaders to build a common sense of vision among leaders and followers, eliciting school goals and priorities through collaborative processes rather than imposing them from above. Hallinger writes that the role of instructional leader, much less transformational leader, still take a back seat to school leader as manager: "Eager principals often found themselves swimming upstream in their attempts to put instructional leadership theory into practice at their school site" (Hallinger, 1992 p. 40).

The *phronesis* of school leadership seems to cross these conceptual boundaries of managerial, instructional and transformational leadership. Though the ability to engage in each type of leadership activity clearly differs across leaders, conceptualizing *phronesis* as the capacity to exploit and design means in order to achieve relevant goals is as appropriate for maintenance as for the collective development of new goals. For my purposes, I will use instructional leadership as the bridging concept for these three forms of instructional, managerial and transformational leadership. Properly considered, instructional leadership is a balance of managerial and transformational abilities depending on the needs and the capacities of the organization. As I will describe below, the face of instructional leadership changes in light of the capacity of the school

organization — the transformational leadership required as a school addresses a paucity of resources with programs designed to build human capital can, over time, give way to a managerial leadership as the status quo becomes accepted as a viable situation to enable desired changes.

Still, I wish to draw a clear distinction between the activities of school leaders and school teachers. Although teachers can, and in many cases do, act as the key instructional leaders in schools, their work as leaders differs from their work as teachers. Instructional leaders *establish and maintain the conditions for the possibility of ambitious instruction* — leaders help to establish the conditions within which teachers teach. Turning back to Cohen, leaders intervene either directly, through mentoring, observation and evaluation, or indirectly, through collaborative design projects, the establishment of structures that support reflection on practice, or through the allocation and acquisition of resources, in altering the conditions that constrain ambitious instruction in classrooms. For ambitious instruction to take place, leaders and teachers must work together to assess and rebuild the conditions that hold teachers and learners back. What ambitious instruction looks like, in practice, however, is often very difficult to uncover. In the school I consider below, ambitious (i.e. constructivist) instruction often seems to give way to a more traditional, direct form of instruction that helps students and teachers reach district goals for language arts and mathematics learning. And while the teaching and learning considered may not be ambitious in Cohen's sense, they are ambitious in the sense that the changes implemented in the school, over time, have come to help teachers see their work as a process of collaborators in data-driven instructional design efforts instead of as autonomous practitioners each left to his or her own devices. The *phronesis* of instructional leadership consists in the capacity to recognize the goals worth achieving, and the ability to build and marshal the appropriate resources to bring these goals to fruition. Instructional leadership becomes transformational when it needs to build capacity, and

managerial when it needs to distribute and evaluate capacity. There is *phronesis* is each of these phases of leadership practice.

1.4 *Phronesis* and Expertise

In contemporary cognitive science, it would seem that the concerns raised by the study of *phronesis* would be best covered by research on expertise. Both expertise and *phronesis* are concerned with understanding optimal task performance by individuals in complex situations; both are seen as the outcome of long processes of training and experience. Simon's (1993) observation that it takes at least ten years to acquire expertise in a given domain might apply just as well to the development of practical wisdom. Wenger's (1995) distinction between the study of expertise and skill acquisition fits right into Aristotle's distinction of *episteme* from *phronesis*:

> Whereas skill acquisition can be tested by straightforward performance measures, expertise is a much more subtle notion…(It) must also be evaluated by the capacity to handle novel situations, to reconsider and explain the validity of rules, and to reason about the domain from first principles (Wenger, 1995 p. 302).

However, practical wisdom in particular, and wisdom in general, are topics seldom examined by modern psychologists (Birren and Fischer, 1990). Robert Sternberg (1990) has remarked that "wisdom is about as elusive as psychological constructs get" (Sternberg, 1990 p. ix). This may be because wisdom is a multidimensional human phenomenon, encompassing and integrating many aspects of affect, cognition, human development and experience into a single faculty. It may also be because wisdom is difficult to replicate and exercise in controlled conditions, and seems to thrive best "in the wild." Aristotle might suggest that trying to understand practical wisdom with the lenses of cognitive and social psychology might result in an epistemic *mis*understanding of expertise, and will probably miss the *phronesis*. Nevertheless, there have been several attempts to understand

wisdom in terms of general themes in research on expertise. Arlin (1990) connects wisdom with problem-finding ability, and Kitchener and Brenner (1990) consider wisdom as a form of reflective judgment on the ability to solve ill-defined problems. Baltes and Smith (1990) suggest that wisdom is a form of expertise in what they call fundamental life pragmatics, such as life planning or life review. Many wisdom researchers point toward the deep and profound characteristics of wisdom, and several researchers connect this profundity with life stage development (Baltes and Smith 1990; Sternberg 1990) or accumulated, situated life experience (Csikszentmihalyi and Rathunde, 1990; Orwoll and Perlmutter, 1990).

Phronesis shares with these accounts of wisdom a sense of an achieved capacity, acquired through experience, that is difficult to isolate or quantify. The focus on the knowledge that guides and accomplishes action makes *phronesis* a more specific study than these cognitive and developmental accounts of wisdom. Still, the cognitive aspects of research on wisdom and expertise offer a way to structure accounts of *phronesis*. Aspects of research on expertise, particularly issues involved with problem-setting and problem-solving, provide a useful model for unpacking the some of the cognitive dimensions of *phronesis*. In the following sections, I wish to inform my consideration of *phronesis* with two aspects of contemporary expertise research. First, in section 1.4.1, the contemporary focus on problem-setting and problem-solving in expertise research offers a foothold on the ability to describe a cognitive mechanism through which *phronesis* works. Second, I would like to consider how the impressive knowledge-base on the expertise of school leadership compiled by Kenneth Leithwood and colleagues can frame and add to our understanding of the *phronesis* of school leadership.

1.4.1 *Phronesis* and Problem-solving

As we have seen above, Aristotle's account of *phronesis* gives a central role to the cognitive process of deliberation. For Aristotle, deliberation is "calculating well with a view to some good end" (NE 1139a29). Deliberation operates by choosing the appropriate means for a given end, and is applicable especially in cases where the appropriate means are in question. *Phronesis* is, in large part, the ability to deliberate upon experience, precedent and insight in order to devise means to address problematic situations. In other words, deliberation is a way to think about problem-solving.

Problem-solving has long been a foundational interest for research on expertise. Holyoak (1991) describes successive generations of expertise research each designed to understand how people solve problems. The first generation, led by Newell and Simon (1972) and Simon (1994) tired to understand how general heuristic (or weak) methods might be used to solve a wide range of problems. Expertise, it was felt, was a capacity to successfully bring problem-solving procedures to bear on a wide range of problems. This search was subsequently challenged by an effort to understand how expertise is a result of accumulated and well-organized domain specific knowledge. Holyoak (1991) comments:

> the second generation of expertise theories were born of the hope that domain-specific knowledge, built on top of a foundation of weak methods for serial heuristic search, would have the power to fully model human experience (Holyoak, 1991 p. 312).

For example, Anderson's (1982) search for domain specific production-rules, fired at appropriate complex stimuli, provided insight into how people solved problems in math. Both cases, together with Holyoak's (1991) predictions for the promise of connectionist models of expertise, reflect the perennial interest in expertise research on problem-solving.

There are two stages in the problem-solving process: problem-setting and problem-solving. Problem-setting, or problem-framing, refers to the way a complex or ambiguous situation is recognized as an example of a certain kind by practitioners. Problem-setting is the ability to recognize a situation *as* a problem. Problem- solving, on the other hand, involves the development and implementation of a consequent action plan designed to resolve the problem. Simon claimed that "much problem-solving effort is directed at structuring problems, and only a fraction of it in solving problems once they are structured" (Simon, 1987 p. 187). The problem-setting stage, where the issue is defined as a member of a certain class, is critical to understanding in the exercise of *phronesis*. Problem-setting involves the concept of *apperception* developed in Gestalt psychology (c.f. Wundt, 1897), the concept of "seeing as" that takes our everyday perception as an experience of a certain kind. Apperception lives on the border between sensation and cognition – it refers to the way a messy situation "hits us," or the way it initially "makes sense" to us.

Research in problem-setting indicates that problem-solutions can follow naturally from how apperception initially "structures" the problem. Hatano and Inagaki (1991) develop how the structure offered by a problem in the problem-setting process helps to distinguish between routine and adaptive expertise. Well-structured problems are those which suggest readily apparent solution routines; while ill-structured, or messy problems, include competing features not easily reducible into a clear problem-setting. The degree to which a problem is well- or ill-structured may depend upon the expertise of the solver. Reitman (1965) noted how open constraints[9] are characteristic of ill-structured problems. For Reitman, ill-structured and well-structured problems vary according to the number of

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[9] By constraint, Reitman means "one or more parameters the values of which are left unspecified as the problem is given to the problem-system from the outside or transmitted with the system over time" (1965, p. 112).

constraints left open by the problem-framer (1965 p. 144). Reitman considers fugue composition as an example of a complex problem-solving activity. The composer must "transform the problem by selecting operators which permit the construction of the composition" (Reitman, 1995 p. 262). At the beginning of the project, Reitman notes, not all relevant open constraints can be recognized — some will crop up in the context of solving the problem. Reitman further notes that the kinds of constraints that open down the line will depend largely on the nature of the initial constraint choices. Simon (1973) also recognized that the difference between well- and ill-structured problems depends upon the number of constraints left open in the initial problem-setting stage. Simon explains "much problem-solving effort is directed at structuring problems, and only a fraction of it in solving problems once they are structured" (Simon, 1973 p.187). In a survey of research on expertise, Voss and Post claim that "results obtained from a variety of problem-solving tasks suggest that the representation phase is extremely important, the representation largely determines the solution" (Voss and Post, 1988 p. 265).

This emphasis on the relation of constraints to problem-solving sheds light on how experts think about problems once the goals and the means for solution have been identified. This distinction is captured by Aristotle's contrast of *techne* and *phronesis*. A *techne* is a tradition-sanctioned practice to structure and routinize the solution of initially ill-structured problems. Mastery in the *techne* of composition or construction consists in the ability to use principled, tradition-tested methods to reduce the open-constraints presented by violins or piles of wood, applying the appropriate templates that gives a direction to the subsequent work. *Phronesis*, on the other hand, is a prior to the use of a particular *techne*, in the sense that it helps us to see whether building a house, or composing a fugue, is what we should be doing at all. *Phronesis* acts as an executive function that set an agenda to decide which goals to follow, out of the mess of a complex social

situation, which directions to consider and which problems to identify. *Phronesis* it is the ability to turn an ill-structured into a well-structured problem. It is as if there were a pre-stage in which Reitman's composer was asked what kind of music was appropriate for a given occasion, or whether he ought to compose now or go back to his job waiting tables. Once a fugue is selected, there is a recognizable pattern of open and closed constraints present to the expert composer. But what motivated the initial selection of fugue composition as a worthwhile goal to pursue? *Phronesis* brings prior experience, technical expertise, and insight to bear on making sense of complex situations, and giving a clear direction for subsequent action.

1.4.2 *Phronesis* and Experience

Practical wisdom is a capacity that develops over time. From Aristotle onward, people interested in understanding wisdom have focused on the role of experience. Wisdom and experience have always walked have in hand, with experience acting as a necessary, but not sufficient, criteria for wisdom.[10] Orwoll and Perlmutter (1990) claim that wisdom requires experience, advanced cognitive development and ability to transcend personal perspective. While much expertise

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[10] There is an odd tension in the conception of wisdom as knowledge accumulation over experience. It would seem that wisdom might consist in the accumulation of insight and certainty that result from experience. However, there are two key traditions in Western thought that specifically repudiate this accumulative model. In Plato's *Apology* (21a), the oracle at Delphi deems Socrates the wisest of all men, precisely, it would seem, because he know that he does not know. Socratic wisdom is a compelling lack of knowledge about practical or theoretical affairs coupled with the undaunted thirst to find out what can be known. Second, in the Judaeo-Christian tradition, there is a striking contrast between or worldly wisdom and divine wisdom. This contrast comes out clearly in St. Paul's injunction that the Lord rejoices in the folly of the wise (1 Corinthians 2:14). From a divine perspective, practical wisdom is a kind of folly, a provincial sense of importance that fades in comparison with true wisdom. Aristotle's distinction between practical (*phronesis*) and theoretical (*scientia*) wisdom makes it clear that *phronesis* applies only to the world of action, and leaves room for the cultivation of a higher wisdom: "for it would be strange to think that the art of politics, or practical wisdom, is the best knowledge, since man is not the best thing in the world" (NE 1141a20-21). Thus Aristotle allows *phronesis* to rule the world of personal and political affairs, and provides for another kind of wisdom to contemplate the heavens.

research focuses on discreet examples of problem-solving, psychological research that addresses wisdom attempts to understand how patterns of problem solving become integrated into experience over time. Baltes and Smith (1990) adopt a cognitive-developmental view toward wisdom, concluding that wisdom is rooted in "a content rich, culture dependent and experience based kind of knowing" (Baltes and Smith, 1990 p. 5). They claim that wisdom is a final stage in cognitive development, an outcome of "successful aging" (Baltes and Smith, 1990 p. 128). The relation of experience with wisdom enables the wise to discern which problems are appropriate to address in the context of uncertain situations (Arlin, 1990). Voss and Post comment that experience may "reflect a large amount of specific pieces of knowledge rather than the relatively well-integrated, hierarchical description of knowledge domains that is frequently reported" (Voss and Post, 1988 p. 257).

Over time, the patterns that emerge in experience form a repertoire of strategies, concepts and stories that experts rely upon to make decisions. This results in the development of problem-solving styles, or characteristic ways of seeing problems. While experience can give experts access to the general characteristics of problem-solving situations, reliance upon experience can also blind experts to emergent, novel patterns. Expert seek-strategies may rely too heavily on what Johnson (1988) called "broken-leg" cues that too readily react to local variation as opposed to conceptions of general systemic characteristics. While experience creates a perspective to access the problems of fundamental importance, it can also lead experts to recognize patterns where they do not exist, or where they are only the minor themes in a larger cacophony. Here *phronesis* seems to require a large dollop of humility, of understanding that no matter how acclaimed or successful our experience, there are always problems and situations that humble us. Developing representations of practice that make these local patterns of apperception visible is a key opportunity for a reflection on practice

(Schön, 1983) through which patterns in problem-solving and setting can be examined, and reconsidered, by practitioners.

What can the study of *phronesis* learn from research in expertise? Both try to make sense of high quality behavior — expertise in a given field, and *phronesis* in the conduct of life. Both deal with forms of knowledge in action. Expertise tries to understand the schema and content of the knowledge that guides expert behavior, while *phronesis* acknowledges the fundamental difference between the kinds of knowledge that guide action and knowledge legitimate for its own sake. Given Aristotle's distinction between *epistemic* and *phronetic* knowledge, research on expertise seems to aim at building an epistemic knowledge base of phronetic practice. *Phronesis*, on the other hand, does not seek to create knowledge for its own sake, but instead is a primarily pedagogic account of knowledge – the purpose of studying *phronesis* is not an end in itself, but to pass it on to interested others. Seen in this light, research on expertise and *phronesis* can complement one another—expertise research contributes the schema and the strategies that guide the pedagogical theories of how to help others acquire *phronesis*. Research on expertise helps rescue phronetic cases from being anecdotal by providing the structuring principles of problem-setting and solving to build cases of practical wisdom. On the other hand, the seamless, iterative transition from problem-setting to problem-solving to action and experience that is the signature of *phronesis* helps to unify the disparate elements of research on expertise into multidimensional accounts of practice from which interested practitioners can learn.

1.4.3 The Expertise of School Leadership

Kenneth Leithwood and his colleagues have engaged in a wide study of the expertise of school leadership around the ways in which expert leaders understand problem-framing and solving. Leithwood and Stager claim that "by studying how expert school administrators handle these unstructured problems, …we expect to learn about what Schön refers to as the 'artistry' of school administration"

(Leithwood and Stager, 1989 p. 40). Leithwood and Steinbach (1991) draw upon the expertise research to ground their investigation in seven characteristics of expertise. Experts can:

- Consciously regulate their own problem-solving process (c.f. Schön 1983, Berliner 1986);

- Process more problem-relevant information (c.f. Berliner, 1986; Norris, 1985) and store it in memory in a better-organized, more richly-linked manner — increasing accessibility and extending its application (c.f. Bereiter and Scardamalia, 1986);

- Represent problems using more abstract categories and with reference to more basic principles (c.f. Berliner, 1986; Chi, Feltovich and Glaser 1981; Voss, et. al. 1986); they also have better pattern-recognition skills (c.f. Bereiter and Scardamalia, 1986; Berliner, 1986);

- Identify and process more complex goals for problem-solving and goals related to action-plans (c.f. Bereiter and Scardamalia, 1986; Berliner, 1986);

- Spend more time at beginning planning their initial overall strategies, are more flexible, opportunistic planners during problem-solving, and are able to use a greater variety of resources (c.f. Berliner, 1986; Norris, 1985);

- Access many automated, recurring sequences of problem-solving activities (Norris 1985);

- Display more sensitivity to the task-demands and social contexts within which problems are solved.

Leithwood and Steinbach (1993) report that when school principals are asked to sort problems into routine and non-routine tasks, about 1 in 5 problems are judged as non-routine. This ration varied between secondary and primary school principals, for high school principals, about 1 in 4 problems were non-routine,

whereas elementary school principals reported a 1:6 ratio. (Leithwood and Steinbach, 1993 p. 32). Leithwood and Steinbach also report a difference between problem-recognition capacity of expert and novice principals — experts perceived a higher percentage of problems as non-routine (1993 p. 28). Leithwood and Stager attribute this difference to a general characteristic ability of experts to "see novelty in problems which have a familiar cast" (Leithwood and Stager, 1989 p. 29). In another study, Leithwood and Stager (1989) develop brief problem-solving scenarios for principals to untangle and resolve. Six of these problems are presented to 22 principals, six of whom are judged by peers and supervisors as experts. They found that expert principals:

- focused fewer efforts on problem-interpretation;
- expended more effort on determining the goals to be achieved;
- identified more principles and guiding values;
- did not spend much time identifying constraints;
- provided more detail about possible solutions;
- made fewer statements irrelevant to the problem.

These findings suggest that the problem-setting process for expert principles is relatively inarticulate and automatic. Their ability to characterize a problem really is a matter of apperception, of seeing-as. This emphasis on the problem-setting process makes Simon's insight that problem-structuring is most of the work, the solution-process follows naturally from the way the problem is structured.

Leithwood and Stager (1989) also report that expert principals are less ego-centric in their responses; they seem more able to give their attention to the problem-at-hand without investing the problem with their sense of success or self-esteem. Experts are more concerned for the good of the school and the students; while typical principals are more concerned with the perception of themselves as leaders. This hard-won badge of administrative competence enables expert

administrators to act as custodians of an organization, able to use and distribute available resources and act as agents of change that are not so personally invested in displaying their expertise in having all the answers. Expert principals rely upon existing information infrastructure in coming to problem-resolution For experts, even difficult problems surrender to careful analysis. They tell stories of successful problem-resolution appropriate to the content of the problem, and manage to design appropriate agendas for ambiguous or ill-structured problems Typical principals find many problems mysterious and insurmountable, and tell stories of situation of similar situations simply because they were equally tough. Experts give detailed plans about what they would do, probably because they *know* what they have done in similar circumstances. Typical principals give less detail, relying upon consultation with folks about what might be worth doing (p. 51).

The research developed by Leithwood and his colleagues suggests that expertise in school leadership consists in the ability to readily diagnose and prescribe appropriate action plans for sticky school problems. Expert leaders process problems more efficiently, zeroing in on salient problem aspects, and are able to bring to bear appropriate resource on the problem-setting. Interestingly, experts seem less personally involved with the diagnostic process, they seem more assured of their abilities as leaders and less willing to see any particular exercise of their abilities as a test of their competence. Typical principals seem to lack the precision and the distance of their expert colleagues, their inability to discern the essential issues of problems, and to disentangle questions of self-esteem from the success of their solutions seems to limit their capacity as leaders.

While recognizing the value of the contributions Leithwood et. al. have made to understanding the expertise of school leaders, I would like to point out several areas where research on *phronesis* could supplement their work. First, the research methodology that pervades this research relies mainly on protocol analysis of how practitioners react and diagnose problematic situations. This may

be adequate for addressing leadership expertise, but it falls short for a consideration of the tasks and constitutive situations necessary to consider the *phronesis* of leadership. Leithwood and Stager (1989), for example, select school leaders based on their performance and on their reputations as good school leaders, the scenarios to be resolved by the participants consist in brief problem-statements and the problem-resolutions consist in verbal and written responses to questions. The ability to size-up a situation, to judge which aspect merit action and which should be passed over, is an important aspect, but certainly not the whole picture for *phronesis*. Aristotle distinguishes understanding and *phronesis* by stating "practical wisdom issues commands, since its end is what ought to be done or not to be done, but understanding only judges" (NE 1143a9). Without the action that follows from the problem diagnosis and prescription, without a sense of the ability of the leader to coordinate the agenda to effectively address the problem, we are left short of a consideration of *phronesis*. As a more subtle point, the problem-settings themselves used by Leithwood and Stager (1989), for example, seem to do most of the cognitive work of defining the appropriate aspects of the situation for participants. Here is an example of a problem-setting:

> Your new school is one in which staff have never been involved in the
> setting of school objectives and are apparently not interested in doing so.
> You have come to believe that it is a very important thing for the staff to
> set school objectives and to evaluate them at the end of the school year
> (1989, p. 45).

Once framed in this way, the problem is both too specific and too general to get at the problem-setting aspect of expertise so valued by Simon (1973). The problem is both too specific and too general — to specific because the resultant discussions are largely a matter of selecting the appropriate strategy to resolve the problem, too general because it lacks most of the relevant situational constraints and affordances that make such situations challenging. It is a pseudo-problem that

already does most of the cognitive work of refinement and feature selection to makes sense of a complex situation. The presentation of generic problem-statements is an invitation to present generic solutions. For example, we do not know why the school has never been involved in the setting of objectives. The existence of such a school might be quite surprising given recent (and not so recent) emphasis on standards-based reform. Are there factions of the faculty that resist all instructional changes, or just this change? What has the previous administration done along these lines? Are there department or grade level chairs who see this as a valuable process? And why does the principal want to push for instructional objectives at all? It would be easy to come up with scenarios that illustrate every relevant variable here, but that is beside the point. The point is that all exercises of *phronesis* take place in real situations, with myriad real constraints, untold stories, hidden traditions, and implicit norms. Getting at problem-solving ability on such a clean situation is like experimenting in friction-free environments — even if the resultant insights are valuable, what do they really say about how practitioners solve problems in practice? To untangle general problem-solving abilities, such research points us toward the general characteristics that we might encourage in instructional programs for novice school leaders. But to actually develop the instructional programs that help to get us there, we need to understand how expert practitioners parse the details of their settings to construct workable agendas, not on the slick ice of abstract problem formulations, but in the gritty slush of day-to-day school leadership.[11] If Simon is right in his claim that much of problem-solving happens in the problem-setting, then the details that constrain that problem-setting, and the ways in which expert leaders negotiate feasible paths through this setting, is most of the work of *phronesis*.

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[11] Leithwood et al (1994) acknowledge this difference and express it in terms of a "high road" and a "low road" approach to the study of expertise.

1.5 Conclusion

      Practical wisdom is difficult to study. This may be because, as a comprehensive human phenomenon, is bridges our conventional categories of cognition, affect or behavior, indicating a way of life difficult to discern in isolated exercises. It also may be because, as a hard-won reward for a life well-lived, it is simply not available, as a whole, to those who have not lived similar lives. While epistemic knowledge can be represented apart from the knower, codified into systems of thought, and reproducible under similar circumstances, *phronesis* is more of a capacity to act than a body of knowledge. This is because *phronesis* must take account of the particular, that is, it must be concerned with how knowledge and experience are brought to bear in particular situations.

     Phronesis is required to ascertain which aspects of the situation call for consideration, and which can be ignored in capturing the essential nature of the case. This apperceptive, or "seeing-as" aspect of *phronesis* is similar to the idea of problem-setting from expertise research. Once the relevant features of the problem are highlighted, the problem-solution can flow naturally from the formulation. In their study of the problem-solving abilities of school principles, Leithwood and Stager (1989) suggest that situation-recognition is a key difference between expert and novice leaders – experts recognize situations as problems that can be addressed with a combination of problem-solving procedures, whereas novice leaders are not as good at situation-recognition, and are not as adept at bringing problem-solving procedures to bear on complex situations.

     The connection between apperception and problem-setting suggests that we can begin our study of *phronesis* as a form of situated expertise in action, understood by uncovering the ways actors set and solve problems. The conceptual framework developed here includes to following features of *phronesis*:

Phronesis results in action. Aristotle claims that *phronesis* involves more than abstract understanding or *episteme*. *Phronesis* is the capacity to act as well as the

capacity to discern, the ability to recognize features of a situation as a solvable problem is an important aspect of practical wisdom (NE VI-7). Any consideration of practical wisdom apart from how effectively the solutions unfold in action will miss the active nature of *phronesis*.

Phronesis is developed (and expressed) over time through experience

Phronesis is fundamentally related to character in action, that is, how character displays its nature over time through action. Consequentially, finding *phronesis* involves understanding patterns of action over time, and the context in which those actions occur. Experience, or the degree to which practitioners learn from their prior actions, plays a key role in the development of both character and *phronesis*.

Phronesis is the cognitive aspect of distributed leadership. Phronesis acts as an executive function to determine which arts to exercise, in which order, and when to stop. Aristotle makes room for political *phronesis* by distinguishing wisdom used for the good of the self with wisdom used for the good of the community. However, the *phronesis* of leadership extends beyond the cognitive capacities of the individual leader. This implication of the Aristotelian distinction between political and practical wisdom allows us to consider the community as a unit of analysis for leadership just as the individual is the unit of analysis for morality. The distributed leadership framework (Spillane, Halverson and Diamond, 2001) points toward ways in which leadership tasks can be studied as socially co-enacted and situationally enabled and/or constrained by the leadership context. The *phronesis* of leadership is distributed throughout the community, and discerned through the ways in which social and situational networks support the completion of leadership tasks.

Phronesis is discerned in the patterns of problem-setting and problem-solving over time. Just as all leadership is not directed toward transformation, not all *phronesis* is expressed through addressing problems. However, problem-solving practices for a unique opportunity for the study of practical wisdom by

providing an anchor for investigation. While the research on problem-solving emphasizes the importance of apperception, or problem-setting, accounts of *phronesis* must address how problems are actually solved and how the patterns of problem-setting and solving emerge over time.

Phronesis depends upon a higher good. *Phronesis* depends upon insight into a higher good for the individual or the community (NE VI-13). The transcendent moral vision which guides *phronesis* gives light to the ability to discern the good in a situation, and gives meaning to the consequent action agendas. Without adherence to a transcendent set of moral values, *phronesis* is mere *metis*, and ability to devise appropriate means to achieve current ends. Aquinas thought this moral aspect to be the core of *phronesis*, and the Latin translation of *phronesis*, *prudentia*, became the organizer of all moral virtues in Thomistic moral theory.

Taken together, accessing and documenting *phronesis* poses a daunting challenge for educational research. *Phronesis* emerges as an overarching human capacity not easily retained as a whole it is analyzed into component parts. The core mechanism, the ability to discern and successfully address problems, cannot be understood as an aspect of *phronesis* apart from the action which follows, the good served by the action, the place in the pattern that emerges through character, and the particular situation that gives the action meaning. Because *phronesis* issues in action, it often rests largely on implicit assumptions about the natures of problems and situations. Bourdieu (1990) distinguished the logic of theory from the logic of practice on these grounds, claiming that while the logic of theory results from a reflection on and reconstruction of practice, the logic of practice itself is articulated implicitly into action, and not ordinarily available for explicit articulation into theory. This may be why learning *phronesis* has traditionally taken place in apprenticeships or mentoring arrangements, during which the sense of practical wisdom can slowly come together as the student engages in the tasks

of the master, and learns the nuances of practice as the tasks unfold. Schön's (1983) reflective practice theory suggest one way to make *phronesis* visible for both practitioners and learners. Here we argue that collaborative design research may open another window the *phronesis* as researchers and practitioners alike engage in the collaborative search for feasible solutions to pressing current problems.

CHAPTER 2

ACCESSING *PHRONESIS*

2.0 Introduction

      The goal of this chapter is to develop and present a suite of methodological tools for researchers to access, document and communicate the *phronesis* of school leadership. Researchers in participatory design, narrative theory, and reflection-on-practice have made significant progress along different dimensions of making work practices visible and accessible. Here I rely upon this prior work to consider the epistemological and methodological issues involved in making the practices of school change visible to practitioners and researchers. This approach is grounded in a form of pedagogical research intended to help practitioners reflect upon how and what to change about their current practices.

      This chapter, *Accessing Phronesis*, offers a theoretical framework for constructing *narratives of practice* that make sense of how to access and document the practical wisdom of instructional leadership. In Section 2.1 I provide a rationale for how participatory design efforts that result in locally designed artifacts[1] can open a window on the *phronesis* of local leadership practice. Here I take artifacts to refer to things designed by practitioners and researchers as solutions to the challenges presented by practice. Artifacts can range from material things, such as toothbrushes and memos, to abstract entities used to

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[1] By locally-designed I mean that the artifact in question is either created or adapted by practitioners in the local context of use. An artifact designed at a school for use at the school counts as locally designed. A policy developed at district level is not locally designed, but its subsequent adaptation to the idiosyncrasies of a particular school context by practitioners counts as local design. Thus the distinction between design and implementation are blurred in the concept of local design.

constraint temporal resources, such as calendars or meeting agendas. When researchers, designers and practitioners work together in collaborative design teams, they often end up putting their assumptions about the nature of the problem to be addressed on the table in the design process. This activity helps to "make visible" the assumptions implicit in the design process, and provides a window into practical wisdom.

Section 2.2 presents a framework for using reconstructed narratives of practice, organized around collaborative design efforts, to explore of how local leadership practice evolves and emerges over time. Local narratives of leadership practice offer a chance to look at *phronesis* in depth, exposing the systemic interconnections of tasks, artifacts and situations that give meaning to the practice of local school leaders. This sense of depth and interconnectedness is critical if we are to understand the embedded, situated nature of *phronesis* in the patterns of problem–setting and –solving as they emerge over time.

Section 2.3 offers an account of how locally designed artifacts serve as anchors for constructing narratives about the practical wisdom of school leadership. Artifacts such as locally designed programs and policies provide a focus for leadership work, and the story of their development and re-use can reveal how practical wisdom originates and evolves over time. The research presented in this dissertation focuses on the leadership practices of a single k-8 elementary school. The data collected around these locally constructed artifacts are analyzed and refashioned into narratives about the how complexities of how the problem-framing and –solving processes of leadership practice have unfolded over time in an urban elementary school with a demonstrated record of leadership prowess.

Section 2.4 discusses why multimedia narratives of practice help researchers establish a reality check on the verisimilitude of narrative accounts of practice. The section provides a description of how the design guidelines for

building multimedia narratives draw on prior research done for the Living Curriculum project. Multimedia representations of practical narratives offer practitioners an opportunity to interact with narratives guided by their own interests, and to hear and see how the documented practice looks in action. (Chapter 4 discusses how one reconstructed narrative of practice about a locally designed artifact is first used construct a multimedia case of practice, then user-tested with the artifact designers and with similarly situated practitioners in other schools to determine the narrative's verisimilitude and fidelity to the original experience).

Section 2.5 describes the site for this research, and provides a justification for why a single research site is appropriate for the research goals of this dissertation. Finally, section 2.6 offers a review of the data gathered for the purposes of this dissertation, and offers a preview for how these data are used to provide the material for the remainder of the dissertation.

2.1 Design: Opening a Window on Practice

In the *Ecology of Human Development* (1979), Urie Bronfenbrenner relates the story of how his first mentor in graduate school remarked "if you want to understand something, try to change it" (1979, p. 37). Bronfenbrenner continues:

> Implicit in this injunction is the recognition that the relation between person and environment has the properties of a system with a momentum of its own; the only way to discover the nature of this inertia is to try to disturb the existing equilibrium (1979, p. 37).

Attempting to disturb a pre-existent social inertia without the cooperation of the system participants is a hazardous research agenda – chances are you will find out more about practitioner attitudes toward unwelcome disruptions than about the practical wisdom inherent in the system. However, there are situations in which system participants themselves identify problems and open out their practice to

welcome outsiders in to help resolve the problems. This is the work of many organizational consultants – to help practitioners clarify and resolve issues that crop up in practice. The work of consultants is seen as product-driven, that is, a matter of how knowledge and resources are marshaled toward the design and implementation of artifacts to resolve problems. The success of the work is measured by the degree to which the problem is solved.

However, what consultants do not often do, at least explicitly, is regard their intervention as a form of knowledge creation itself. Professional consultation is rarely viewed as a form of scholarship where one of the goals is the principled creation of a window into the heart of the practical wisdom. The collaborative problem-identification and the design of problem-solutions itself can be seen as a kind of practical wisdom and an important forum for research. Just as Julian Orr (1996) shows how the copy machine war stories accessed by researchers engaged in repair activities with workers can generate insight into the nature of this work, consultative design work to resolve complex systemic problems in schools can generate insight into the practical wisdom of school teachers and administrators. Shrader et. al. (1999) showed how collaborative design efforts between researchers and teachers "put practice under negotiation" by revealing the intentions, resources, problem-setting and problem-solving abilities of participants in the joint process. Design here refers to the active and iterative construction of artifacts that reify the school's instructional priorities in tangible, theoretically-informed artifacts. These artifacts can range from innovative curricula, to revamped organizational structures, to computer programs. Design methods provide a framework in which the cycle of designing, building and rebuilding artifacts establishes a self-correcting gauge to measure progress according to both the priorities of the school's goals.

There is a significant body of research that informs design methods and efforts. For example, participatory design research grows out of a need to develop

products more attuned with the needs and capacities of users (Schuler and Namioka, 1993). This is especially important in the design of knowledge-intensive artifacts, such as computer programs, where careful involvement of practitioner in the design process can greatly ease the learning curve for new technologies (Suchman, 1998). While the ultimate aim of participatory design research is to develop better products, an important residual consequence is the insight that both designer and practitioner can have into their own practical wisdom. When researchers and practitioner communities participate legitimately in design, each has its own reasons, its own felt needs to engage in the process which can end up being made visible in the design process. This "making visible" of the assumptions that go into the design process can help both researchers and practitioners become aware of what the other expects from the consequent product (Suchman, 1995).

Using a participatory design approach to address problems currently of interest to practitioners has the potential to open up the implicit network of assumptions, expectations, legitimation and design taken for granted in everyday work. Participatory research alone, however, without design, may not make visible the processes of work because without a common goal practitioners may not feel the need to disclose the actual practices of their work. Without engagement in a common design task, participatory research can allow practitioners and researchers to rely upon espoused practices rather than actual theories in use (Lave, 1988; Argyris and Schön, 1974). The design purpose has to be something worth achieving for both communities. Thus design work to help practitioners identify and resolve their problems can bridge the gap between research and practice by helping practitioners to make the work problematic, making visible the tensions and ambiguities of practice while opening a new window for researchers to see how cognition and practice unfold in day-to-day work. A focus on local design work has the additional benefit of opening a window into the problem-setting activities of practitioners in a system. Looking at local design efforts allows

researchers to understand how the thinking of school members develops and makes concrete assumptions about what is valuable in their work. The collaborative design and redesign processes makes the beliefs of the school community about the form and value of communication tangible – providing access to practice for community members to reflect upon and for researchers and other audiences to learn.

The practical wisdom of school leadership, seen through the framework of distributed leadership, suggests that collaborative problem-setting and problem-solving are core elements of leadership practice. Collaborative design efforts are thus prime opportunities to uncover the practical wisdom of these problem-setting and –solving practices. Researchers in the LeTUS program have established workcircles as a framework to organize collaborative researcher-practitioner curriculum design (Shrader, et. al.., 1999). Collaborative design efforts, however, take place outside of formal arrangements of researchers and practitioners such as workcircles. In fact, the vast majority of collaborative design efforts in schools seem to arise in the context of solving acute and chronic problems as they emerge. Thus school leaders regularly seem to engage in collaborative design efforts to frame and solve local problems. The variety of collaborative design efforts available for the researcher to study provides trade-offs in terms of access to the process, reliability about reports of the process, and the authenticity of the artifacts produced by the designing communities. Researchers seem to encounter three main varieties of collaborative design opportunities in the course of research on school communities:

- *Researcher-practitioner cooperative design efforts*. Like the LeTUS workcircles, this form of collaborative design involves both researchers and practitioners in helping to frame and solve problems. This form of design includes official consultation arrangements, collaborative curriculum design, and some forms of program evaluation in schools. While excellent

opportunities for research, researcher-practitioner cooperative design efforts often require significant advance planning, and may not surface the *ad hoc* nature of daily problem-setting and solving practices. Also, because of the semi-official nature of the collaboration, practitioners and researchers alike may rely more upon espoused rather than enacted practices in the planning process.

- *Observed practitioner-practitioner collaborative design efforts.* School leaders often engage in collaborative design efforts to solve both acute and chronic problems as they emerge in daily practice. Access to many of the acute problems faced by practitioners may be closed to researchers, either because of the confidentiality or the immediacy of the problem faced. Chronic issues, such as school improvement or professional development planning, often require advance planning and can be scheduled and documented by researchers. Observation of collaborative design efforts gives researchers access to the practices of problem-setting and solving of school leaders. However, since they do not participate in the design process, researchers are not forced to make their assumptions about the nature and outcomes of the work public during the process. Observation of collaborative design processes thus gives researcher access to a greater range of design practices important to the school community, but do not give a strong test of the researchers own assumptions about the practice.

- *Recounted collaborative design efforts.* The collaborative design efforts leading to the programs and initiatives that actually shape current practices may not have seemed significant at the time. Programs that local leaders consider significant to the current instructional program as opportunities provides a powerful window to investigate previous problem-setting and -solving practices. Recounting previous problem-setting and –solving practices, however, put researchers at two removes from practice. Not only did

researchers not get to participate in the practice, but the recounted practice has all of the disadvantages of *post hoc* reconstructions of reasoning processes (c.f. Schön, 1983; Garfinkel, 1967). Recounted collaborative design efforts thus

Table 1

Trade-offs in using collaborative design opportunities for research on practice

Form of Colla-borative Design	Resulting in authentic, useful artifact?	Research access to the design process?	Reliability of recountedprocess?
Researcher-practitioner cooperative design efforts	Lower probability due in part to the research-sponsorship of the design	High access	High reliability
Observed practitioner-practitioner collaborative design efforts	Higher probability due to the practitioner-based origin of the design	Mid-level access – the researcher can observe, but usually not participate, in the design process	High reliability due to the synchronous presence of the researcher
Recounted collaborative design efforts	High probability because practitioners are likely to remember significant artifacts and design processes	Low access because the design process concludes before research starts	Lower reliability because of retrospective reinterpretation of significant events

help researchers focus in on the practices directly relevant to current instructional priorities, but the distance from the original problem-setting and –solving phases raises questions about the reliability of reconstructed accounts.

The trade-offs of these three forms of collaborative design opportunities are summarized in Table 1. Ideally, efforts to investigate practical wisdom though collaborative design should include multiple accounts of a variety of instructional design efforts. Triangulation among the three varieties of researcher access to design should help to create a better-rounded account of practical wisdom through highlighting the regularities and outliers of observed and reconstructed practice.

2.2 Narrative Reconstruction and Analysis

The study of how to document and communicate complex practices has long confounded researchers. Complex practices, such as school leadership, are situated

in local ways-of-life and traditions such that representations which seek to find what is common across situations lose the rhythm, and often lose the heart, of the practice itself. Pierre Bourdieu (1990) goes so far as to claim that any attempt to discern the guiding principles of practice, that is, to develop a "practical logic," will result in a "contradiction in terms" because the reasons which guide practice are seldom those that emerge with subsequent analysis of the practice. Bourdieu claims that practice is "unaware of the principles that govern it and the possibilities those principals contain; it can only discover them by enacting them, unfolding them in time" (1990, p. 92). For Bourdieu, logic is the capacity to abstract characteristics from a selection of cases, constructed after the practice is complete. The thought which guides practice, on the other hand, exhausts itself in the unfolding activity, and cannot be anticipated and "captured" by those interested in understanding practice.

Jerome Bruner (1986) noticed this tension between thought and practice, and suggested that there might be two corresponding ways of thinking carefully about the world of practice: *paradigmatic* and *narrative* reasoning. Bruner distinguishes between paradigmatic and narrative reasoning as modes of thought "each providing distinctive ways of ordering experience…(and) irreducible to on another" (1986, 11). While both forms of reasoning involve *post hoc* reconstruction of events and actions, paradigmatic reasoning arrests the flow of practice to discern transcendent characteristics across cases, while narrative reasoning seeks to reconstruct the flow in the hope of capturing how the practice makes sense to practitioners. By paradigmatic reasoning he means arguments and principled knowledge that one "verifies by eventual appeal to procedures for establishing formal and empirical proof" (1986, 11). Paradigmatic reasoning attempts to discern *post hoc* what is common across situations by constructing verifiable hypotheses about the nature of practice that result in truth claims. Paradigmatic reasoning characterizes many traditional qualitative and quantitative

approaches to social sciences research as attempts to verify hypothesis according to standardized rules of argument and evidence. The paradigmatic reasoning is accountable to two main criteria of validity: a) paradigmatic arguments must be shown to *correspond* to the facts, and b) paradigmatic arguments must be

Table 2
Contrast between narrative and paradigmatic reasoning

Paradigmatic Reasoning	Well-formed argument	What is true across situations (generalizability)	Replicability	*what* the key characteristics are of good instructional leaders?
Narrative Reasoning	Well-wrought Story	What is true within situations (coherence)	Verisimilitude	*how* new instructional practices become established and evolve over time?

verifiable by independent investigators. However, because paradigmatic reasoning aims discern the relevant features of practice by abstracting from events as they unfold, the organic, sequential nature of practice can often be lost in paradigmatic analysis.

The quality of paradigmatic account differs from narrative as a "well-formed argument differs from a well-wrought story" (1986, 14). Narrative reasoning, which portrays the temporal and sequential nature of practice, is the form of thinking people use to make sense of their world. Narratives trace individual paths through the tangle and welter of situational constraints and affordances – good narratives show how people navigate through and make sense of their experience. Rather than surrender the flow of practice to paradigmatic analysis, narrative research attempts to enfold the crucial aspects of practice in the retelling of the story. The measures of validity are different for narrative than for paradigmatic reasoning. Narratives are essentially dialogic and aim to inspire a sense of fidelity and verisimilitude with an audience. The fidelity criteria is similar to the correspondence criteria in paradigmatic reasoning in that both

accounts aim to reproduce a sense of what happened in the situation described. Fidelity and correspondence differ, however, in what must ultimately be reproduced as a result of the analysis. Paradigmatic reasoning must have a factual correspondence with the events described, whereas narrative reasoning must reproduce the way that the events described hang together in the experience of the participant. There thus is room in narrative for fiction, allegory and metaphor in attempting to re-create fidelity in narrative accounts. The verisimilitude criteria is aimed not at recreating the conditions for the participant, but toward how the account "rings true" for a similarly situated practitioner. In a sense, narrative fidelity points "inward" toward the practitioner whose practice is being portrayed, while verisimilitude reaches "outward" toward potential audiences.

Narrative is the appropriate form of reasoning to both capture and represent the unfolding nature of a practical wisdom that discloses itself in day-to day practice. In the midst of the context of change, a carefully selected, situated, fine grained story is more important than the result of the action because the inherent sequentiality offers a glimpse of how practitioners evaluate, deliberate and participate in the interplay of knowledge, decision, intention and most importantly, action. A coherent narrative preserves temporal sequence and contextual priorities, providing intelligible cues for the recollection of practical wisdom and situating the resultant pronouncements in authentic contexts accessible to practitioners in similar situations. Good storytellers do create plot structures and maintain them through narrative – hearing well-constructed stories puts us in the flow of events. The criteria of narrative validity press researchers to develop narratives that make sense of practices in ways sufficiently rigorous for researchers, instructive for practitioners and valid for those whose practices are being described. This three-fold objective of rigor, pedagogy and validity is a difficult task to undertake in a principled manner. Local narratives of practice can often take the form of anecdote or testimonial, selectively emphasizing certain features of the context and

de-emphasizing others. While local narratives might make sense to practitioners (satisfying the fidelity criterion), they may omit certain features of the situation necessary for verisimilitude. What is needed are principled ways of constructing narratives of practice that that incorporate the complexity and context of how leadership tasks unfold in a given type of situation, at a level both accessible and instructive to interested practitioners. I hope that this discussion of narrative, and the chapters 3 and 4 that follow, will lead toward a method and several examples of how to constructed narratives with principled methods.

Building narratives that have fidelity and verisimilitude is a multi-step process. Polkinghorne (1995) points toward how researchers can engage in this narrative analysis and reconstruction. He contrasts the *analysis of narratives*, that is "studies whose data consists of narratives or stories, but whose analysis produces paradigmatic typologies or categories," with *narrative analysis*, or "studies whose data consists of actions, events and happenings, but whose analysis produces stories" (1995, p. 5-6). Making practical wisdom visible to practitioners and researchers involves first the deconstructive power of analysis of narrative, followed by the reconstructive power of narrative analysis. Stories culled by practitioners emphasize relevant local details and lessons learned, but omit many "taken-for-granted" assumptions that make the practice itself possible. The analysis of narrative must be preceded by a collection and analysis of espoused and enacted stories, observations and artifacts necessary to fill out the context of action, situating stories so they are accessible to those outside of the situation. These data can be analyzed in terms of anticipated and emergent themes in order to draw out the paradigmatic aspects of the data. However, if the analysis stops here, the researcher is left with pieces of stories and abstractions that tell *what* went on without telling *how* it happened. Polkinghorne's narrative analysis, which, for the purpose of contrast with the prior step, I will call *narrative reconstruction*, points to how story reconstruction proceeds through the

sequencing and selection of relevant situational detail so that the stories remind practitioners of where they have been and teach learners of how they can get there. Determining the "right level", that is, the level of detail and scope that is most accessible for listeners to get the gist of the story, is a critical goal for successful narrative research.

Thus, data must first be gathered from participants in the form of stories, observations and artifacts. These data must them be refashioned into purposive narratives that can be shared with practitioners familiar and unfamiliar with the situation. Following through with Polkinghorne's method leaves the researcher with reconstructed, but untested, narratives of practice. Testing for narrative validity, for fidelity and verisimilitude, requires the researcher to share the reconstructed narratives with audiences and to reshape the story in light of resultant observations. In Chapter 4, I borrow a page from human-computer interaction research to introduce both narrative representation and user testing in order to examine narrative validity. Once constructed, testing for fidelity and verisimilitude should be conducted via reflective interviews and user testing studies. Representation of reconstructed narratives in hypertext, video-based formats can open up narrative, allowing practitioners to navigate their own paths through the story, and examine what the practice looks like as it unfolds. User-testing methods allow researchers to walk practitioners through the narrative, asking probing questions to test comprehension, and allowing narrative strengths and gaps to emerge in the testing process. These final steps supplement Polkinghorne's account with a check on narrative validity by furnishing a principled way to share narratives with an audience, providing the measures of fidelity and verisimilitude.

2.3 Artifacts as a Window into Practice: Design Cycle Analysis Model (DCAM)

A main challenge to constructing pedagogically effective narratives of practice is to discern which aspects of the situation are necessary to communicate the gist of practice. As we have seen from Chapter 1 (Section 1.3.1.3), the situational distribution of leadership practice asserts that leadership tasks are co-constituted by various aspects of the local environment. But which aspects of the situation matter for documenting and communicating practice? Here I will offer an argument that narratives grounded in *locally designed artifacts* provide a reasonably self-defining account which aspects of the situation matter in constructing narratives of practice.

The concept of *artifact* gives researchers a handle on the relation between leadership tasks and constitutive situations. Artifacts are externalized representations of ideas and intentions used by practitioners in their practice (Norman, 1988). Herbert Simon (1996) writes of the artifact as an interface between the inner and outer world. For Simon, our cognitive inner lives include plans, intentions, goals and strategies that we hope to fulfill in our interactions with the world. Artifacts mediate this interaction by helping us to reduce the perceptual noise of the world and by helping us to attend to the aspects of our world we want to notice and name. While Simon focused mainly on computers as conceptual artifacts, it is easy to see how notebooks, calendars, meeting agendas and conceptual frameworks all serve as interfaces to the world.

However, artifacts are more than neutral conduits from thought to action. Wartofsky (1973) notes how artifacts are "already invested with cognitive and affective content" (p. 204). Wertsch (1991) identifies artifacts as members of the family of *mediational means* that enable actors to engage in purposeful activity. Mediational means are themselves cultural products, resulting sometimes from explicit design (e.g. buildings, Buicks, or board games) and sometimes received as highly-evolved cumulatively designed symbol-systems (e.g. English, HTML, or

waltzes). The sharp dichotomy between actions and actors is blurred by thinking of artifacts as mediational means. As mediational means, artifacts are not merely used by practitioners, but they come to constitute practice. For example, math textbooks act as more than mere conduits for the teacher's knowledge and expertise, rather they come to shape and inform the practice itself. As with Hutchins' (1992) analysis of the pilot's cockpit, it is difficult to imagine teaching as something separable from supporting artifacts. Further, considering artifacts as mediational means blurs the distinction between artifact design and use. While a designer explicitly builds intentions into the artifact, practitioners also use the artifact according to their own intentions, goals, plans and understandings. Considering how artifacts are used in practice gives us insight not only into how work is done, but also into how practitioners think about their work.

If we consider leadership as a mediated activity, it is clearly difficult to either access or portray leadership practice apart from its constitutive network of artifacts. But which aspects of context genuinely constitute practice? Practitioners and researchers may disagree on which aspects of a situation constitute practice, and both perspectives may be unaware, for either practical or theoretical reasons, of significant constitutive factors that shape practice. For example, school leadership practices are constituted by district and local expectations embodied in evaluation forms, daily schedules, or faculty contracts that shape practice behind the scenes, establishing the touchstone constraints for what is seen as possible at the school. The key condition for an innovation identified by one group, for example, as a program designed to promote professional community among teachers, can be downplayed as insignificant by another group, who credit an improved textbook series for improvements in student learning.

Here is where the local design and use of artifacts can provide a window into the relevant, constitutive aspects of the situation. Using a cognitive approach to practice (c.f. Ch. 1, pp 44-48), I claim that leadership tasks are often organized

around problem-setting and solving activities. Practical problem-setting and solving form an iterative cycle – tentative solutions are advances based on a particular view of the problem, and the problem-setting is often readjusted when faced with the inadequacy of the implemented solution.[2] The iterative nature of problem-solving is often shown when prior solutions become to conditions for future actions. Problem-setting and –solving practices often result in artifacts designed to address problems that occur in the context of work. These artifacts can be adapted from pre-existing artifacts, such as the local implementation of district policies regarding truancy, professional development, or the school calendar; or practitioners can design novel artifacts to address local problems. For example, a school can borrow and customize a pre-existing design for all-day pre-school program to address the need to provide child-care for working parents while, at the same time, providing critically important learning opportunities for young children. The same school can also look at the adequacy of the summative data provided by district accountability measures to design local formative measures intended to guide teacher and administrative instructional practice during the year. In each case, the contrast between pre-existing and novel artifacts is blurred in practice, as the adaptation of a pre-existent model is always an example of redesign, and the creation of novel artifacts always relies upon the customization of pre-existing ideas. Local design, whether in the form of implementation, adaptation or novel redesign, is thus always in part a matter of design work.

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[2] This iterative learning from prior problem-solving efforts is a key aspect of many forms of practical expertise (c.f. Schön, 1983) Perhaps an indicator of teacher or administrator burnout is when the cycle no longer iterates — when the problem-solutions are regarded as "good enough" and the practitioners no longer make the necessary corrections to initial hypotheses in order to insure appropriate problem-resolutions. Argyris and Schön (1974) capture the differences between linear and iterative approaches to problem-solving in their distinction between Model I and Model II learning.

While locally designed artifacts can be seen as outcomes of problem-setting and solving, an interesting methodological procedure emerges when the process is read backwards from artifacts to the problem–setting and solving practices. Here artifacts, the procedures which led to their development, and their subsequent uses in the school community can act as windows into the practical wisdom of local school leadership. This backward-reading process resembles the backward-mapping process established by Elmore (1979) to understand the relation of policy implementation to development. By considering implementation and adaptation as the key features of policy use, Elmore established a precedent for considering local practice as a critical aspect of the policy development (and analysis) process. Looking backwards from artifact development to problem-solving processes does not necessarily have the reverse hierarchical connotations, from local practitioners to policy makers, as in Elmore's analysis. This is particularly true with locally designed artifacts which have, at most, a lateral movement back from the artifacts to the local community members who acted as designers and users. In this backward reading process, artifacts can be used as catalysts for sustained attempts at reflective practice (c.f. Schön, 1983) by drawing attention to the problems the artifacts were intended to address, and to the ways in which the designers intended to address the problems.

Pressing on artifacts as a window into practice is valuable for several reasons: 1) the accessibility of artifacts give multiple points of entry for inquirers to seek out the nuances of the problem-framing and –solving process; and 2) the designed artifacts themselves stand as representations of aspects of the addressed problem the community wanted to notice and name. Using locally designed artifacts as occasions for asking questions about how the artifacts are designed and used by practitioners, we can learn more about the ways in which leaders frame and solve problems in their schools. For example, pressing on an ambitious school improvement plan can lead practitioners to recount the resources relied upon, the

situational constraints and affordances perceived, and how the goals external and internal to the school were understood to affect instructional practice.

Designed artifacts provide an additional benefit allowing researchers to examine how practice unfolds over time. Sometimes programs and policies are designed to address current problems in the school, and do not become institutionalized as aspects of the daily instructional practices of the school. This can happen when leaders establish solutions for acute issues (e.g. the sudden influx of children from another school) or when the implementation of the artifact is mandated from agencies outside the school (e.g. an externally motivated school review process). But, in other cases, locally-designed artifacts are used and re-used in the school, becoming significant resources for the institutional culture. Indeed, a large part of instructional leadership practice over time, especially for the macro-task of developing professional community, seems to reside in the institutionalization of artifacts that enable teachers to think and collaborate about their practice. When identified and pressed, these key institutional artifacts not only disclose their genetic problem-setting and solving processes, but can open a window on the systemic patterns of problem-setting and solving practices within the school. As will be shown below, determining how the locally designed artifact that have become institutionalized resources for the school culture can generate a compelling story of how leadership evolves and shifts over time, resulting in a clearer sense of local practical wisdom, and reflecting the iterative cycle of learning from problem-solving efforts.

Figure 2 represents the effort to schematize the relation between problem-setting, problem-solving and artifacts. This Design Cycle Analysis Model (DCAM) proposes that artifact creation is preceded by a problem-setting and –solving process, and that pressing on artifact creation will disclose not only the problem solved, but also disclose how resources were used, constraints recognized

Figure 2   Design-Cycle Analysis Model (DCAM)
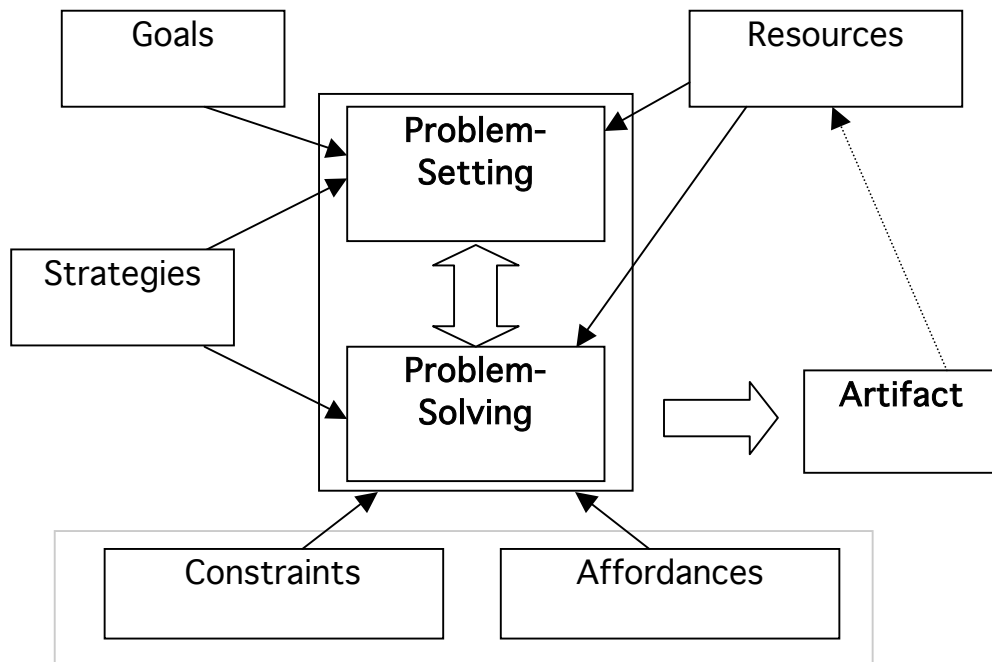
and overcome, affordances exploited, and goals intended. Each major phase of DCAM is described in some detail below:

1. *Problem-setting*: Most artifacts result from one (or several) problem(s) identified in need of a solution by practitioners. This initial problem-setting identifies the relevant aspects of the situation implicated in the problem, and, as Simon (1983) suggests, points toward a possible course of action toward the resolution. The problem-setting relies upon *goals* both internal (e.g. teachers wanting to be better informed about upcoming assessment efforts) and external (e.g. district mandates to tie accountability measures with standardized testing in math and science) to the school community, and is informed by the *resources* (e.g. human, social and material capital) available to the leaders. The problem-setting can be isolated to several individuals, or can be a distributed process as administrators and faculty members share their perspectives on what kind of problem they were facing and how it might be addressed.

2. *Problem-solving*: Once the problem is determined, actors set agendas to engage appropriate community members in the process of designing a relevant solution. Most often a design process issues from an agenda calling for a series of targeted meetings to resolve the issue. The problem-solving process of practitioners is shaped by the *constraints* recognized as obstacles and boundaries of the problem-space, and by *affordances* that permit a certain range of action within the problem-space. The problem-solving process can draw upon the same *resources* that informed the problem-setting phase.

3. *Artifacts*: While many problem-setting and –solving cycles result in decisions, some also result in the creation of artifacts that embody intended problem-solutions. Artifacts embody the intentionality of designers, and this intentionality is intended to guide the use of the artifact in practice. For example, the series of annual collaborative school improvement planning meetings results in a draft of the school improvement plan. Designed artifacts often, but not necessarily, become institutionalized as *resources* which the school can draw upon to frame subsequent design tasks.

It is important to note that the Design Cycle Analysis Model is indeed a cycle, which gives it explanatory power for the systemic interaction of practices. Documenting practical wisdom as if embodied in a large-scale iterative design process helps us to see how interconnected the leadership practices actually are — how the completion of micro-tasks draw upon an extensive bank of previously designed artifacts that now act as resources in the task and process setting of current and future design projects. Considering artifact use as a step in an iterative, on-going problem-solving and setting process helps to recreate the systemic nature of practice, and opens a window into the developmental, experiential nature of practical wisdom in schools.

Data collected in order to complete the narrative reconstruction cycle can be guided by the DCAM structure. The artifacts recognized by the school community as significant bearers of practical wisdom can be used to anchor reconstructed narratives. Once identified, pressing community members about the problem-setting and –solving processes behind these artifacts serves as a methodological guideline for conducting interviews and observations, and as a narrative reconstruction guideline for reassembling narratives of practice. Pressing how designed artifacts can come to act as resources for subsequent practice can act as a catalyst for reflective practice as practitioners recollect the influence prior design efforts can have on future practice. With similarly situated practitioners outside the local school community, artifacts provide a convenient handle for narratives of practice, helping practitioners to understand the purpose and the nature of the represented practice.

To illustrate, let us consider the example of a high school that chooses to implement an after-school test preparation program to help boost sagging student performance on standardized tests. In this case, the artifact is a local adaptation of a popular test-preparation program. Using the test-preparation artifact as an occasion to investigate problem-solving and –setting practices reveals several interesting features. The problem-solving process was initiated by the curriculum director, the principal, and the 12th grade science and math teachers. Because of pressure from parents to provide a viable program, the administrators insisted that something be done, but left it largely to the teachers to decide what would be done. The team met several times to decide upon a solution to the test score issue. They quickly ruled out asking students to contract with an outside company (the costs would restrict access for some students) and incorporating a test-prep section in an already overcrowded annual instructional program. They decided on a modest, optional after-school program that would meet for three-week before the test was

given. There would be a nominal fee for the program that would be used to pay a stipend for the science teacher who volunteered to lead the class.

What would this program have to say about the practical wisdom of leadership at the school? Figure 3 shows how we can begin to use the DCAM model to generate questions that would illuminate different aspects of the practical

Figure 3 Application of Design-Cycle Analysis Model (DCAM)
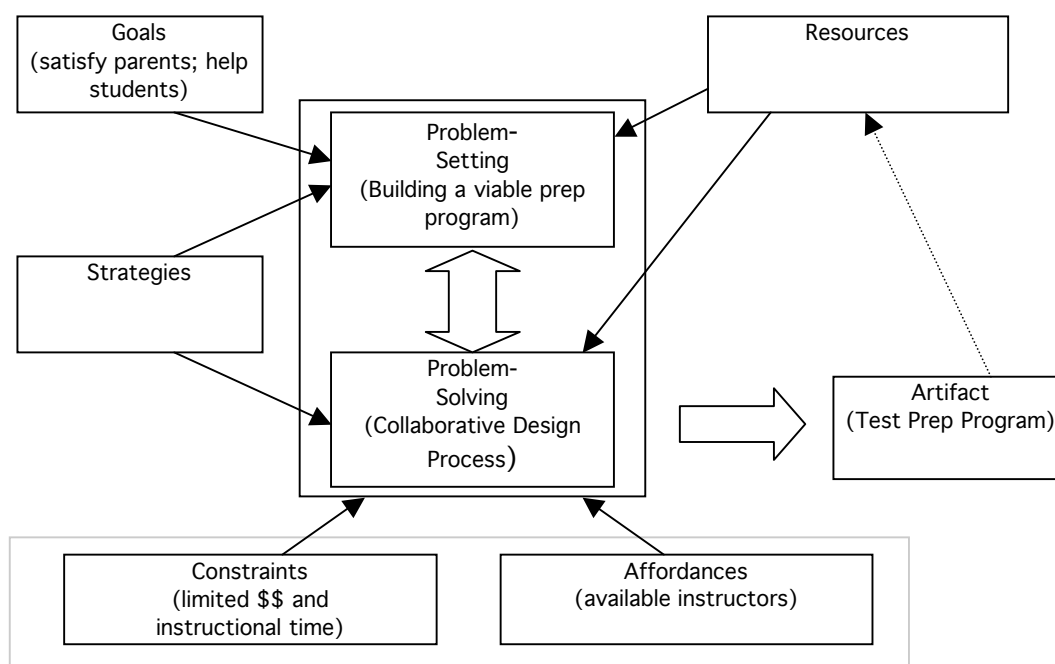
wisdom of leadership. The problem-solving process that led to the artifact was collaborative, and reflected the different goals and resources available to the designers. To further explore the problem-solving practices, we might ask why it included only the four members, and why the process seemed restricted to the program offered within the school community. In the problem-setting process, it was clear that the goals of the program differed for administrators and teachers. What was their perception of the goals of students, or of other teachers not

included in the design process? Further, how had have other similar problems been addressed, and were these precedents relied upon in develop the current artifact? Using the test-prep artifact as an occasion to investigate leadership practice opens up an array of issues ranging from personnel, to professional community, to the traditions of leadership in the school. The DCAM also anchors these issues in a concrete artifact that can serve to reveal enacted rather than espoused practice as leaders reflect upon the reasons for the particular features of the program. Still, in order to get at the patterns of problem-setting and –solving practices, the test-prep program would have to be developed along side similar instructional initiatives to reveal commonalities and differences in practices across contexts.

Locally-designed artifacts thus give a reason for examining narratives of practice for external practitioners under the guise of reviewing a program for potential adaptation to their own school community. As we shall see in Chapter 4, external practitioners reflecting on the practical wisdom involved in artifact design can act as a catalyst for reflection for their own similar practices, or about whether they could adapt the represented artifact into their local school community.

2.4 Multimedia Case Design

Narratives of practice grounded in local artifact design lead practitioners to evaluate the represented practiced, but can also act as catalysts for reflection on their own practice. Schön (1983, 1987) emphasizes the power of reflection on practice in helping practitioners learn from their work. Argyris and Schön (1983) comment how providing occasions for reflection on practice is a key for organizational learning as well. They describe how reflective learning (Model II learning) helps practitioners realize the patterns and mistakes of their theories-in-use, and establishes a framework to minimize the natural defensiveness of

reflecting on prior practice (Argyris and Schön, pp. 88-90). Reflection on these narratives of practice help give *access* to these theories-in-use.

But how can we measure the internal validity of the narratives themselves? Altheide and Johnson's (2000) reflexive ethnography can provide a reality check on the development of narratives of practice. Like Bruner's conception of narrative, Altheide and Johnson (2000) claim that the goal of ethnographic narrative: "is not to capture the informant's voice, but to elucidate the experience that is implicated by the subjects in the context of their activities as they perform them" (2000 p. 491). How can we assure that it is the experience of the participants, rather than the narrative author, that is being elucidated? In part, we never can, due to the interactive process of narrative construction. But we can develop measures to bring the reconstructed narrative back into contact with the practitioners so that they can report on the degree to which represented experience correlates with their own.

Multimedia narratives of practice provide an interesting opportunity for providing this form of "reality check" on narratives of practice. Multimedia narratives of practice provide two key advantages over linear, text-based narratives: 1) incorporating video and documented artifacts in the narratives can give a sense of the authenticity and immediacy of the practice represented; and 2) hypertext narrative organization can give the practitioner greater control over the direction of the narrative path, allowing practitioners to craft a path according to their own interests. While some researchers are skeptical of the capability of multimedia narratives to inform research on practice (e.g. Banks, 1994), other researchers have reported on the value of incorporating video into the narrative analysis and reconstruction process to stimulate reflection on practice. Jordan and Henderson's (1995) *interaction analysis* describes a process whereby video-taped examples of practice are logged and summarized, then broken into selected vignettes. These vignettes then form the basis for a reflective discussion in which

practitioners comment upon the intentions, goals and outcomes of their work. Frederiksen et. al. (1999) tell of how this type of reflective video practice, used with small groups, helps teachers reason through each others practice; while Shrader et. al. (1999) use reflective video techniques for capture teacher's practical wisdom in a multimedia web-based system design to aid in teaching project-based science curricula. Each of these uses of video as an aid to reflection helps to close the gap between espoused and enacted practice by putting a task network on the table for consideration. A task network is a proposed (or enacted) sequence of activities engaged in by practitioners to accomplish selected goals. A curriculum plan for a course, or a teacher evaluation cycle, serve as examples of task networks. This reconstructed account of the task network in the video creates an occasion for reflection, recollection and often disagreement as involved practitioners recall the reasons why the action unfolded the way it did. However, the consequently shared task network challenges participants to align their recollection claims with what happened, providing a reality check, a measure of inter-rater reliability, that keeps both researchers and practitioners on the same page. As the reconstruction of practice is then more tied to the task network; the network itself is made apparent and visible. This shared account of the task network provides a common reference point for making practice visible.

The hypertext structure of multimedia narratives also offers users a greater opportunity to interact with the story. Hypertext narratives open up the possibility of non-linear paths through complex stories, allowing users to chart courses based on their own interests. The non-linear, digressive structure of hypertext narratives is well-suited to the computer gaming world, giving players a sense of immersion and agency within the narrative (c.f. Murray, 1997). Web sites such as "Valley of the Shadows" (http://jefferson.village.virginia.edu/vshadow2/) emphasize user agency to provide users an opportunity to forge hypertext paths through historical documents to explore the causes of the American Civil War. Narrative as sense-

making medium, however, sometimes require an overarching linear structure to construct a sense of sequence for the reader/user. Plot is often guided by a linear sequencing of events in order to make sense to an audience. Balancing an intentional linear structure with a practitioner-defined open structure presents an interesting challenge to authors of multimedia narratives.

2.4.1 Case Design and the Living Curriculum

Greg Shrader's dissertation (2000) on the Living Curriculum project has explored many of the issues in constructing case narratives of teaching practice to support curricular enactment. Described briefly above, (pp. 46-47) the Living Curriculum is a multimedia, case-based system designed to support teacher's enactment of project-based science curricula in elementary and middle-schools. Originally, the Living Curriculum was to be designed to address teacher, administrator, and parent interests. Shrader's work on the Living Curriculum focuses on the teacher performance support system. Cases of expert enactment are indexed to the underlying curriculum sequence in order to show interested teachers just-in-time video and text-based examples of good practice.   Focusing on the practice of two good teachers enacting project-based science curriculum enabled Shrader, in effect, to document and represent the practical wisdom of these teachers. His breakdown of "content knowledge" into instructional, curricular and diagnostic knowledge (Shrader pp. 17-18) reflects how the teachers framed and solved problems as they emerged in the context of teaching the curriculum.

Shrader accessed the practical wisdom of *teachers* through observation of their classroom teaching and conducting reflective discussions based on video selections of their teaching. Accessing the practical wisdom of school leaders presents a slightly different challenge than Shrader addresses in his research. Shrader's design provides both linear and user-defined narrative flow into the cases through building what he called *question-based*, *task-based* and *narrative* (or

temporal) organizing themes into the cases (Shrader, pp. 27-8). The task-based indexing is of particular interest here. Shrader developed a task-based organization from two sources: 1) a concept-mapping model (c.f. Trochim, 1989) was used to organize teacher knowledge in order to construct indexing parameters; and 2) the underlying curriculum structure itself provided a touchstone for task-organization. This two-fold source of organizing information represents for teachers somewhat of a departure for documenting the practical wisdom for school leaders. An established curriculum helps to define the work of teachers, providing a suggested task structure that can frame and standardize teacher practice.

There is no clear analogue for curriculum, however, to organize the practice of school leaders. The absence of an underlying organizing structure for documenting and representing leadership practice presented a considerable obstacle and challenge for the present research. Indeed, the entire case building, representation and sharing cycle of this dissertation can be seen as a way to shed some light on a possible analogue to curriculum for school leadership. In the absence of a clearly accessible underlying task-structure for school leaders, the *question-based* and narrative, or *temporal*, organizing themes used in the Living Curriculum for Teachers (LCT) form the primary means to reconstruct narratives of practice in the Living Curriculum for School Leaders (LCSL) prototype developed in Chapters 3 and 4.

Question-based case construction provides non-linear, user-guided paths through narrative content. The question-based strategy used in the Living Curriculum design draws on the ASK system theory (Ferguson, et. al. 1992). ASK systems are hypermedia information structures based on a conversational metaphor. Information is organized in chains of questions relevant to the subject at hand; practitioners choose the questions of interest and follow questions chains as far as their interest leads them.   The goal-based scenario (GBS) architecture uses ASK systems as a way for practitioners to access and consider expert

knowledge (Schank, 1988). The key task in constructing an ASK system is to organize potential questions into semantic index that associate related questions to one another. Questions ought to be presented to practitioners so that follow-up questions flow logically from main questions. ASK system designers initially, based on their knowledge of the content area and of how practitioners learn the content in question, develop a question index that links content with likely questions. Developing a prototype of the ASK system to test with potential users helps to refine the direction of the ASK system, reestablishing links between loosely associated questions, and vetting follow-up questions. However, without a sense of what kinds of questions are worth asking, an ASK system can leave a user faced with a bewildering assortment of questions, resulting in a "let see where this leads" strategy of question coverage.

Temporal case construction provides a linear path through narrative content. Temporal reconstruction of narratives of practice attempt to resequence events in the order of occurrence, supplementing the story with anecdotal information necessary for an audience to make sense of the account.   Although the familiar plot and sequencing processes of temporal narratives may provide an effective cognitive prop for helping novices become familiar with new practices, experienced practitioners may be more interested in bypassing the sense-making narrative in order to get to the information relevant to their practice. While the reconstructed narratives of practice developed in Chapter 3 follow a temporal organization, the multimedia narrative developed in Chapter 4 supplements the linear narrative with question-based prompts to help the user select a custom path through the story.

LCSL provides the key for how we will turn narratives of practice into occasions for reflective practice. The organization of cases in the LCSL draws on two of the three organizing themes developed in the LCT — or rather, the questioned-based and temporal organization themes are used as a means to tease

out the relevant task-based organization implicit in school leadership practice. The present research contends that a key method for understanding the connection between micro- and macro-tasks of school leadership is to uncover the problems and solutions around which tasks are constructed. The investigation, analysis, construction and sharing of resultant narrative cases should illuminate the connection between everyday and more global tasks, and should tell us something about the practical wisdom of local school leaders.

2.5 Research Site Selection

The account of *phronesis* articulated in Chapter 1 indicates the difficulty of abstracting practical wisdom from the surrounding context. Since *phronesis is* the ability to select appropriate means for emergent, situated problems, then the selection of the research site is a key aspect of the nature of practical wisdom to be uncovered. The first question faced for research on *phronesis* is whether to document and compare practice across schools or to focus on a single school. The interconnected system of tasks in a given school provide an interesting opportunity to consider the evolution and shape of how task-networks emerge over time. The value of this temporal perspective on the development of task-networks suggests that an in-depth study of a particular school might help untangle the snarl of the daily practices of school leadership into coherent organizational patterns. Once identified in a single school, the resultant patterns of how daily practices are organized into coherent initiatives would provide an excellent opportunity for subsequent comparative study. In the research plan presented here, the initial attempt to untangle aspects of the instructional leadership task-network will result in a template for building narrative cases of leadership practice that will be subsequently used to develop case of comparative practice in other schools.

Another methodological challenge for site selection results from the challenge to document either *exemplary* or *problematic* practice. Case study research suggests two divergent themes to organizing cases of practice: 1) cases of

exemplary practice to act as guides for learning; and 2) cases of *problematic* practice to stimulate practitioners to develop an understanding of what could be improved. (see, for example, Lundeberg, Levin and Harrington, 1999) Early on in the LCSL research, the decision was made to develop a case of exemplary practice for several reasons. First the representation of exemplary school leadership practice could serve an important pedagogical function as guide for leaders in search of viable solutions to complex problems. Second, practitioner agreement seemed easier to obtain if the purpose of the research was to document successful leadership practice than problematic practice. As representatives of schools, few school leaders would seem to have sufficient social capital to display the institution in their care as case-book of problematic practice. In addition, leaders in the participating school could capitalize on the research as a valuable record of existing practice for the school.

2.5.1 Research Site: Adams School

The site selected for this research is Adams School, a K-8 school in Chicago.[3] Adams was selected because of an established record of instructional change and is widely recognized as a school with a well-articulated vision and record of instructional leadership. Adams has developed a sense of professional community and instructional focus that has resulted in demonstrable gains in district and state test scores. Under the leadership of principal Dr. Beverly Williams and her administrative team, Adams has engaged in coordinated activities designed to integrate best instructional practices into everyday teaching and learning. The Adams leadership team has been together for nearly 12 years, and recognized the long, organic process required to build a coherent, effective instructional program. Because the story of this gradual development was largely

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[3] All names and places used in this research are pseudonyms. Citations from research sources are indicated with date codes (e.g. 041400 cite indicates an interview or observation from April 14, 2000.)

unarticulated, Williams proved as willing as the Northwestern researchers to build a documentary record of established practice. According to Williams, Adams' was interested in establishing a documentary record of successful practice in the school both for the purpose of familiarizing newcomers with existing practices, and to build a record of practice in the event that one or more members of the leadership team would leave. A record of practice might then serve to inform new leaders of why the school program looked the way it did, the problems leaders resolved to come up with current programs, and how the system had evolved over time to its current state.

In addition to the willingness of Adams school leaders to participate in documenting leadership practice research, several other data sources were used to determine the selection of Adams as a good candidate for *phronesis* research. Two key sources of data were a 1997 report, *Improving Chicago Schools*: *The Teachers Turn*, and *The Students Speak* by the Consortium for Chicago School research, and student achievement data from the Chicago Public Schools Office of Accountability.

1) *Improving Chicago Schools*: *The Teachers Turn*, and *The Students Speak* was a report, developed by the Consortium for Chicago School research, to provide schools with important information to guide their school improvement planning processes. Data-driven local school planning, a key element of the district reforms of the 1990s, was seen to need local school data beyond the grasp of most local school leadership teams.[4] The district-mandated School Improvement Plan emphasizes three main areas of school improvement for each school to organize planning: instructional improvement in math and language arts, and building relations with the local community.[5] The study was developed at the University of

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[4] For an account of the process of recent school reform efforts in Chicago, see Hess (1995).

[5] Adams' School Improvement Planning Process will provide one thread of the narratives on practice developed in Chapter 3 (below)

Illinois at Chicago in consultation with school leaders. Schools that received a response rate of 42% from teachers and 50% of student were issued a 120+ page copy of the report results, comparing their school results to schools across the district.[6] The Adams school leadership profile indicated that Adams teachers held the current school leadership in high regard, scoring well above the system mean across the board in school leadership measures including:

- *Instructional leadership*: teachers saw their principal as very involved in classroom instruction, thereby able to create and sustain meaningful school improvement;

- *Inclusive leadership*: the principal supports shared decision-making and broad involvement;

- *Teacher-principal trust*: teachers and principals share a high level of mutual trust and respect;

- *Teacher influence*: teachers have influence both over classroom matters and major school wide decisions;

- *Joint-problem solving*: there is good communication among teachers to solve problems;

- *Program coherence*: school programs and coordinated and consistent with school goals.

Similarly, Adams stood out in several areas of the Professional Development and Collaboration profile, scoring considerably above the system mean in areas such as:

- *Focus on student learning*: sharing a high consensus about goals and actions for improving student learning;

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[6] The Consortium report promised students and teachers confidentiality. I received permission from the Adams school principal to pseudonymously use the results to frame this case.

- *Peer collaboration*: teachers moving beyond cordial relations to actively working together;

- *Public classroom practices*: teachers willing to open their classrooms to outside scrutiny;

- *Reflective dialogue*: teachers are engaged in frequent conversations with each other about instruction and student learning;

- *School Commitment*: teachers are deeply committed to their school;

- *Innovation*: teachers indicate a willingness to try new things for the sake of their students and to be a part of an active learning organization;

- *Support for Change*: a school-wide environment supportive of change.

The school's leadership ranking stood out from the other categories in the report. For example, in the areas of school-community partnerships, and relations with students, Adams school rated closer to the scores of the system norms. The profile for Adams indicated a school with a strong sense of professional community among the adults in the school that was paralleled by significant increases in student test scores. Interestingly, students did not indicate similar enthusiasm about the instructional climate at Adams, even as their test scores improved. [7]

2) *Standardized test scores*. Student test scores provide another source of data used to select Adams as an exemplary school for documenting leadership practice. In Chicago, like in much of the rest of the country, student achievement scores have become the leading accepted indicator of school success. While not the exclusive measure of instructional leadership, performance on standardized tests is often the most visible measure of effective instructional practices in many districts.

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[7] The data consolidated in this item reflects that students feel far less safe (39%) commuting to and from school, and in their neighborhood (28%), than while in the school. Students feel most safe in their classrooms (85%), and only slightly less so in the public spaces of the school (72%).

Adams can claim well-documented instructional gains by students on standardized tests. Students have shown significant improvement over the past several years on the district-wide standardized ITBS (Iowa Tests of Basic Skills) as well as on the state-wide assessment IGAP (Illinois Assessment Program).[8] ITBS scores show a steady improvement of percentage of students testing at or above national norms over the course of the present administration's tenure at Adams (Figure 4). ITBS scores show impressive improvements in student performance in math, and significant improvements in reading as well. These improvements have occurred in the face of annual student mobility rates of 30-40% and the challenge of 97% low income student population. However, the gap

Figure 4 — Adams ITBS % students at/above national norms
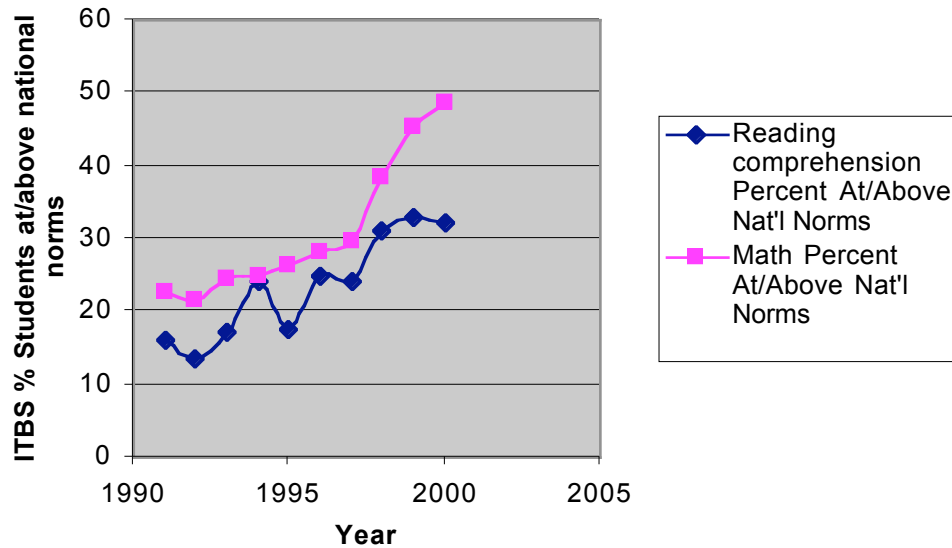
between reading and math performance hinted in the ITBS scores becomes more clear when examining the IGAP scores. The IGAP exam, given from 1993 to 1998, shows a significant difference in the improvement of Adams students between math and language arts (Figure 5). While math and writing scores show gains over the five year period, reading scores appeared to decline.

Understanding how school leaders responded to this subject-matter difference from the IGAP data will emerge as an important occasion to examine practical wisdom in Chapters 3 and 4. The leveling off, and even decline, of

Figure 5 — Adams IGAP % students at/above national norms
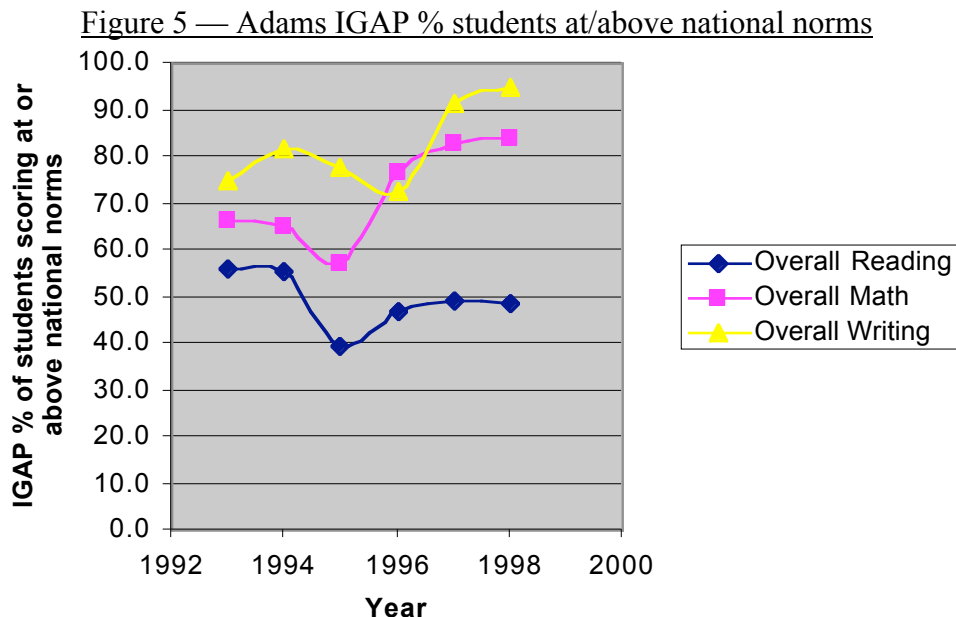
reading scores over the 1994-98 period provided the data for a problem-framing process that resulted in a multidimensional instructional problem-solving reform program around improving reading scores in the school. Following the DCAM

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[8] All test score data cited here are takes from the Chicago Public Schools Office of Accountability School Information Database at http://acct.multi1.cps.k12.il.us/

framework, Chapter 3 uses locally-designed artifacts such as the Five-Week Assessment Program, Breakfast Club, and the School Improvement Plan to chart the practical problem-setting and -solving practices as school leaders marshal resources for concerted professional development design efforts throughout the school to improve student performance in reading.

2.6 Data Collection and Representation

These Consortium data show a school *that* has established a reputation for successful instructional leadership; the student test score data show a school *that* has made significant strides in student achievement scores (albeit with significant challenges yet to meet). What remains for a documenting the practical wisdom of school leadership is to show *how* these changes were effected over time: *which* leadership practices underlie the reputation for effective leadership, and *which* leadership practices led teachers to help student improve test scores. Several members of the staff at Adams have attributed these improvements to their professional development program, and point to "collaboration" as the key to their success. Yet when asked what they meant by collaboration, staff members pointed toward existing programs as examples of collaboration — the goals, processes and artifacts resulting from collaboration, in another word, the *how*, remained tacit. In 1997-8, Principal Williams indicated an interest in documenting the practices of collaboration that she perceived to be the core of the professional learning community at Adams. The professional community, according to Williams, was rooted in an instructional vision that collaborative design work among teachers will lead to improved instructional programs and student achievement levels by promoting ongoing professional learning. School leaders seem to practice what they preach, utilizing the instructional strategies in their practice that teachers are expected to use with students. From 1997-2000, the Adams administrative team helped to co-design a research project that would make leadership practice in general, and collaborative processes in particular, visible for people in the school,

and to serve as a learning tool for newcomers and people in other schools who wished to engage in similar processes.

The research presented in this dissertation developed a research plan described above (sections 2.0-2.5) to investigate the practical wisdom of leadership at Adams. Our observations and interactions confirm the ability of the Adams teachers to lead and participate in vibrant curriculum-centered discussions across grade-levels, share and critique instructional strategies, and reflect the instructional priorities of the school in their practices and their conversations. I collaborated with several researchers to assemble an evidentiary database of observations and interactions with the Adams community. [9] The data we collected served as the basis for subsequent narrative reconstruction and testing work. Project researchers made 1-2 visits per week over the past three years to record a wide variety of leadership practices and reflections at Adams. The data collected and developed include:

- Fourteen structured (protocol established through the Distributed Leadership study) and semi-structured interviews with school leaders and teachers;
- Extensive field notes reporting school meetings and classroom observations, school-wide events, shadowing school leaders, and other occasions;
- A twenty-three hour video-record of significant school events, including interviews, meeting and classroom observations, and reflective interviews using video as an occasion for discussion;

Data were collected in the following formats:

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[9] Most of the data discussed here were gathered under the auspices of the Distributed Leadership Project, (P.I. James P. Spillane, Northwestern University) a National Science Foundation and

1. *Interviews and observations*: We conducted over a dozen interviews with school leaders, and over thirty documented observations of the kinds of practice identified as worth documenting by the school community. These observations included faculty and staff meetings, student assemblies, special programs and presentations, *ad hoc* meetings, observations of teacher discussions and classroom teaching, teacher professional presentations, and other informal conversation.

2. *Artifact collection*. We have built a collection of artifacts that both supported and resulted from these collaborative design efforts, including meeting agenda, assessment forms and results, Breakfast Club readings, and both draft and final copies of the 1998, 1999 and 2000 School Improvement Plans.

3. *Video-taped documentation of selected examples of practice*: We video-taped six faculty meetings and other sanctioned gatherings, and collected a video-record of the physical plant and significant documents of the school environment;

4. *Video-taped reflective interviews of practitioners observing and commenting upon their practice*: We collected four hour-long video-taped reflective interviews with leaders of the school community in order to elicit the problem-setting and solving processes when faced with the results of their practice. After we developed the multimedia narratives of practice, we again used a reflective interview format to bring school leaders into contact with their practice, and to document their reactions and comments on the quality of the narratives.

2.6.1 Data Analysis

   The purpose of the data collection is to provide the raw material for
constructing compelling narratives of leadership practice around the school's key
locally designed artifacts. As described above in Section 2.2, building narratives
of practice requires the researcher to deconstruct the various data collected, then to
reconstruct the data according to the Design Cycle Analysis Model (DCAM). In
order to construct narratives of practice, the data must first be analyzed into
coherent, manageable chunks. Miles and Huberman (1994) discuss three stages of
the data analysis process: data reduction, data display, and conclusion drawing and
verification. In the present study, these phases formed an iterative cycle as the
data were winnowed, organized and verified with practitioners as the analysis
process proceeded.

   Data Reduction. Beginning in Spring 2000, all the Adams data were first
coded into chunks according to all mentions of an artifact relevant to instructional
practice. The chunks varied in size from one-two line segments to entire 4-7 page
field notes, and included transcripts that referred to relevant chunks of video
examples. This coding reduced the relevant data considerably, as many
managerial and decision-centered aspects of practice were not coded as directly
related to the design, implementation or use of instructional artifacts. When
possible, the relevant contextual information necessary to make sense of the
chunks was included to help preserve a sense of narrative flow in the reconstructed
narrative. This phase was conducted as a way to identify a map of the artifact
relevant to instructional practice at Adams school, together with the contextual
data that would help to make sense of the artifact. (In Chapter 3, Table 3
highlights the characteristics of instructional artifacts uncovered at Adams. Nine
artifacts appeared as relevant to the instructional leadership process at Adams)
Three artifacts were featured most prominently in the coding process: the
Breakfast Club, the Five-Week Assessment program and the School Improvement

Planning process. These three were selected as the artifacts recognized most often as key aspects of the instructional leadership practice at Adams. These were subsequently selected as the artifacts around which narratives of practice in Chapter 3 were constructed.

Data Display. Once the relevant artifacts were recognized during the data reduction process, the DCAM model was used as a basis to organize the resultant data into concept maps. Adapted from Novak and Gowan (1984) and Trochim (1989), the simplified concept mapping process implemented here was used to organize the data around the issues identified by DCAM. Data chunks were recorded onto index cards and arranged on a table into categories that corresponded to the DCAM categories. The initial version of DCAM was itself expanded during this process of data display. The DCAM categories were then used to fill out an account of the artifact. For example, all the mentions of Breakfast Club were subsequently coded according to the initial categories of Problem-Setting, that is, how the program was initially or came to be "seen as" by school leaders, and Problem-Solving, the process by which the initial problem-setting was operationalized. Within the problem-setting category, data items were coded according to the *goals* leaders addressed in their formulation of the problem, the *resources* they relied upon, and the *strategies* they used to frame the problem. Within Problem-Setting, the data for each artifact were coded into the *steps* of the problem-solution process itself, the *resources* utilized in establishing a problem-solution, the constraints faced and affordances exploited by leaders in the solution design and implementation process.

Originally, DCAM consisted of three main features as shown in Figure 6. As I organized the data into these categories, I noticed that there were two other categories that began to emerge as aspects of DCAM. The first included the strategies that school leaders used to make the transition from problem-setting to

Figure 6   Original DCAM
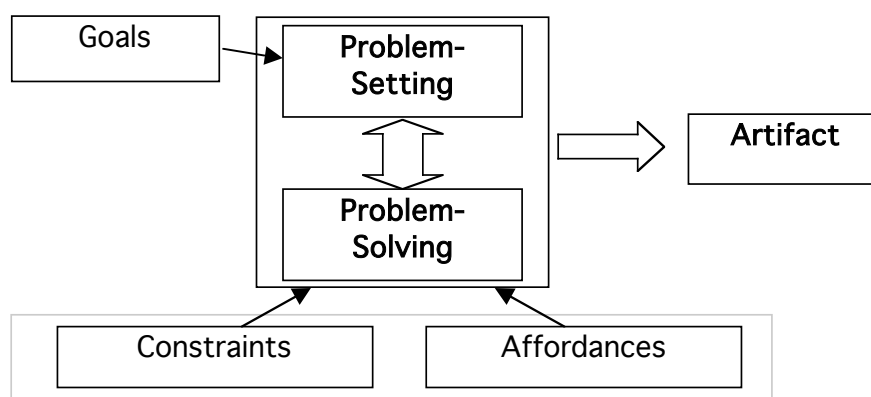
problem-solving practice. The second offered a greater challenge to name. It appeared that other designed artifacts in the school acted as conditions for the possibility of subsequent designs. This feature of increasing organizational capacity and vision seemed to correspond to an increase in the capacity of the organization to engage in and conceptualize change. Following Spillane et. al. (2001), I decided to use the category of *capital* to refer to previously designed artifacts that seemed to serve as precedents and capacity-enhancing devices for the school (c.f. Coleman, 1988; Spillane and Thompson, 1997). For example, after constructing the Breakfast Club narrative it became clear how the professional development programs Teacher Talk, and Teacher Leader evolved as spin-offs. Similarly, the preliminary SIP narrative suggested the importance of a data-driven feedback system to correct and refine the original SIP goals. Subsequent data

analysis revealed an interesting example of how the analysis of standardized test data (041400) are used as occasions for problem-framing and SIP refinement by Adams school leaders.

The data display was a critical step in the narrative deconstruction process, as the data collected as coherent narratives was taken apart and began to be reorganized around DCAM, addressing issues such as the problems the artifact was intended to address, what goals were to be met, and which constraints and affordances guided the problem-solution. The iteration involved at this step led to further field work, focusing on reflective interviews around selected artifacts, to reveal how the artifacts identified have established the conditions for, or provided an obstacle for, future artifact construction efforts.

Conclusion drawing and verification. The development of the narratives of practice themselves was an important analytic activity. In drawing together the narratives, I found that the disparate data and experiences I had during the previous three years began to come together as coherent representations of practice. In the narrative reconstruction phase, I used the DCAM as a guideline to weave the appropriate aspects of the data into narratives to reconstruct a principled account of leadership practice. The initial concept maps served to provide an initial sense-making structure for the deconstructed data, forming categories in which story elements could be placed for subsequent reconstruction. After the concept maps were constructed, the index cards were then organized into a serial order which formed the basic linear structure for the narrative. The resulting linear-ordered narratives, based on the elements of the DCAM model, seemed to need a broader sense of the context of artifact use and design to prove intelligible for audiences external to the school. Categories such as the function, everyday use, and the origin of the artifact were established to give a sense of context for the narrative. I used the supplemented narratives as an occasion to re-sort the data,

looking for evidence of artifacts that supported or resulted from the design of the main artifact.

As the narratives were developed, however, it became clear that several important aspects of the reconstructed narratives were missing from the initial data analysis scheme. First, illustrative examples were necessary to create a sense of verisimilitude within the narratives. Thus examples drawn from the data to illustrate the practices described, missing from the initial DCAM model, provided a necessary measure of narrative verisimilitude. The use of extended illustrations of meetings, conversations or supporting artifacts would serve to show the practices as they unfolded, giving a sense of authenticity to practitioners who might ultimately be persuaded of the phronetic value of the narratives. These illustrations, used extensively in the School Improvement Planning narrative (3.5) and in a more limited fashion in the Five-Week Assessment (3.4) and Breakfast Club (3.3) narratives, came to form another key coding category for the data analysis. Second, the narratives lacked any measure of verification to determine a) whether they had captured the experience of the Adams practitioners themselves, and b) whether they were evocative for practitioners interested in learning how the practice were undertaken at Adams. Chapter 4 addresses the implementation of the method described in Section 2.4 to construct multimedia narratives of practice to serve as a reality check on the narrative reconstruction process.

Taken together, these data analysis steps formed an iterative cycle of collection, reduction and representation designed to draw out the problem-setting and solving practices of Adams school leaders. In Chapter 3, we turn to the narratives of practice themselves to get a sense of how the practice of school leadership unfolded through the design and use of artifacts at Adams.

CHAPTER 3

DOCUMENTING *PHRONESIS*

<u>3.0 Introduction</u>

In Chapter 1 we have seen how *phronesis* is displayed by how individuals and organizations frame and solve problems over time. As a developed capacity, it is expressed through patterns or problem-setting and solving across multiple contexts. Leadership turned out to be a special case of distributed *phronesis* as leaders use and build organizational resources to address emergent and anticipated problems. Chapter 2 argued that in order for us to communicate *phronesis*, we needed to construct a research methodology that allowed us access to how complex problem-setting and solving practices developed over time. Using collaboratively designed artifacts to investigate school leadership allows us to gain a vantage point "inside" practice, to understand how leaders make sense of and design solutions for instructional problems. The research methodology focused on using designed artifacts as occasions for investigating the local tasks of instructional leadership, gathering data around school leadership at the site and rearranging the data into narratives of practice.

Instead of taking a paradigmatic approach to data analysis, in which cases are arranged as if temporally coexistent to reveal commonalities across practice, narratives of practice analyze data by serial ordering of the data, by determining how the data may have unfolded over time and made sense to local practitioners in order to display the developmental trajectory and consequences of leadership practice. Multiple narratives of practice must be developed to access the patterns of *phronesis* across practice. The patterns of problem-setting and solving, the indicators of *phronesis*, are thus revealed in the construction of narrative cases as practitioners face and resolve the emergent problems of their world by

constructing and exploiting local task networks. Revealing the characteristics of these local task networks (i.e. how the network was built, how it makes sense to practitioners, and how it evolves over time) is the key analytical goal of a method that aims to uncover the *phronesis* of school leadership. Measures of methodological validity for narratives of practice are implemented as the narratives are transformed into multimedia cases and used as occasions for reflective practice for the local practitioners themselves and for other, similarly situated practitioners external to the school.

This chapter develops three narratives of practice along the guidelines suggested in Chapter 2, followed by a discussion of the *phronesis* disclosed through the narrative development. Section 3.1 recounts the practice of using the Design Cycle Analysis Model to identify locally designed artifacts that might best reveal *phronesis*, and offers a table of candidate artifacts uncovered through the research conducted at Adams school. Sections 3.3-3.5 consist of three narratives of practice around key locally-designed artifacts of the Adams school community. The collaboratively designed artifacts highlighted in this chapter are:

- *Breakfast Club.* Breakfast Club was designed in 1995 as an opportunity for teachers to discuss research relevant to current instructional initiatives and practices in the school. Each month a teacher leads a discussion before the school day begins about a piece of research, usually about reading or writing instruction, with group of K-3 teachers and administrators over a hot breakfast. While not privy to the design process itself, I have spoken with four administrators and three teachers about the Breakfast Club program, and have enjoyed the breakfast at eight of the thirteen meetings during the 1998-99 and 1999-00 school years.

- *Five-Week Assessment.* The advent of high-stakes testing in Chicago holds schools accountable for student performance in language arts and math. However, the summative data resulting from the exams had not proven

very helpful for the Adams community to guide instructional changes.
Beginning in 1996, several administrators and teachers reverse-engineered
the mandated district tests to discern the critical skills for students to
develop during the course of the year. They then collaboratively developed
a Five-Week Assessment program that would provide formative
information for how well students were achieving their goals. The
assessment program has been fine-tuned over the years in light of changes
in the standardized testing needs, and is now an institutionalized part of the
school culture. While not privy to the design process itself, I have engaged
in conversations with three administrators and two teachers about the
design process, and has had the opportunity to study how the tests have
evolved and how the results have been shared with the faculty.

- *School-Improvement Planning Process.* The school district requires the
  development of an annual School Improvement Plan (SIP) to guide funding
  initiatives within the school around district-mandated instructional goals in
  language-arts and math achievement as well as community involvement in
  instruction. The Adams community takes the SIP as an opportunity for
  collaborative design and refinement of the instructional program, with sub-
  committees meeting throughout the year and whole-faculty meetings in the
  spring to contribute to and refine the final plan. I have had extensive
  conversations with school leaders about the 1999-2000 SIP process, and
  had the opportunity to attend two of the three all-faculty meetings in Spring
  2000.

Each narrative, organized around DCAM (see section 2.3 above), is composed of a
comprehensive description of the artifact and how it is used, an account of the
problems it was intended to solve, the resources utilized, the problem-solving
process, and an account of how the artifact has evolved over time. The concluding
chapter of the dissertation (Section 5.2 and 5.3) offers some reflections on the

practical wisdom revealed through narrative construction, and concludes with a consideration of how these narratives of practice might be transformed into multimedia narratives.

Throughout this chapter I use pseudonyms for the Adams school leaders. The following list is a cast of characters to guide the reader through the narratives so that the relevant people can be related to the appropriate tasks:

Dr. Brenda Williams	Adams School Principal
Ms. Gwen Tracy	Language Arts Coordinator
Ms. Mercy Richards	Assistant Principal: Middle School
Ms. Wanda Baize	African-American Heritage Teacher
Dr. Joanna Schooler	Former Asst Principal and Math Coordinator
Mr. Ezra Johnson	Special Education Teacher
Mr. Timothy Zacharias	Science Coordinator
Ms. Emilia Andrews	Assistant Principal: Primary School
Ms. Jean Brown	First Grade Teacher
Ms. Deborah Walthers	Eighth Grade Math Teacher
Ms. Rey Grovenor	Third Grade Teacher
Ms. Debbie Greene	Second Grade Teacher
Ms. Holly Ogden	Fifth Grade Teacher
Pat Cunningham	Author of the Four Blocks Language Arts Program

3.1 Adams Artifacts

In Section 2.4 I described how the Design Cycle Analysis Model (DCAM) could be used to develop narratives of practice by reverse engineering locally designed artifacts in order to disclose the problem-setting and –solving practices of school leadership. In order to apply DCAM, however, it is necessary to identify the artifacts practitioners hold to be important to local practice. Analysis of the Adams school data revealed nine artifacts that appeared relevant to the development and implementation of the instructional program. To this end I have

identified a range of designed artifacts resulting from collaborative design, and I offer a sample of these artifacts here. The purpose, description, designers, collaborative design process and duration of service are described in Table 3

Table 3

Adams Artifacts

Artifact	Purpose	Description	Designers	Collabora-tive design process (Ch. 2.1)	Duration of Service
1. Breakfast Club	To provide in-house professional development for and by Adams faculty	Monthly meetings before school at which faculty members make and dis-cuss presentations on re-search relevant to current instructional programs	Language Arts Coordinator, Principal, Teachers	Recounted collaborative design	1995-current
2. School Improve-ment Plan (SIP)	To create annual local school plan to aligns instructional and budgeting priorities for the upcoming school year.	District designed artifact that acts as a catalyst for local planning efforts as leaders and teachers develop instructional program to meet mandated student test performance targets	District, Principal, Administra-tion, Teach-ers (approved by Local School Council)	Recounted and observed practitioner-practitioner collaborative design	1989-current
3. Five-Week Assess-ment	Locally-designed testing program to provide formative data to comple-ment summative standardized testing data	Testing program based on reverse engineering summative tests to give teachers and leaders a sense of progress toward improved standardized test achievement	Language Arts Coordinator, Assistant Principal, Principal, Teachers	Recounted collaborative design	1995-current
4. Teacher Obser-vation Process	Process to provide formative and summative evaluation of teachers according to union guidelines and district polices	District and locally designed forms used to make sense of principal-teacher observation session. Evaluations based on district and guidelines local instruc-tional program priorities.	District, Principal, Assistant Principal	Recounted collaborative design	1989-current
5. Real Men Read	Annual event designed to bring male African American role models into the school to read to the students	An annual breakfast and school wide program in which African-American men gather to eat and read to children throughout the school	Language Arts Coordinator, Assistant Principal, Principal	Recounted and observed participant-participant collaborative design	1998-current

Artifact	Purpose	Description	Designers	Collabora-tive design process (Ch. 2.1)	Duration of Action
6. Career Day	Annual event designed to offer Adams students an opportunity to survey career possibilities.	A two-part annual assem-bly for middle school stu-dents to listen to African-American speakers, then meet with African-American professionals in a variety of career fields.	Guidance counselor, principal, teachers	Observed practitioner-practitioner collaborative design	1999-current
7. Chicago Annenberg Challenge Curriculum Planning Process (CAC)	Year-long curric-ulum planning process to document colla-borative design efforts in building multidisciplinary middle school curricula	Collaborative curriculum design effort using LeTUS project-based science curricula as a seed for building middle-school cross-disciplinary curriculum.	Science coordinator, Teachers, Northwestern and Roosevelt University Researchers	Researcher-practitioner collaborative design	2000-2001
8. Science Coord-inator Position	Position estab-lished to design and implement cross-school science program in line with Adams' designation as Math-Science Academy	Promotion of 6th grade teacher Tim Zacharias to renovate science program and to design and teach middle school science curriculum in collaboration with classroom teachers	Science coordinator, Principal, Assistant Principal	Observed practitioner-practitioner collaborative design	1999-2000

While the list offered here certainly does not exhaust the relevant instructional artifacts at Adams, these nine artifacts seemed to play the most prominent role in our 1998-2001 data collection efforts. The artifacts ranged widely in design, purpose, and duration of use and development. Some of the programs took all of the school's attention for a short period of time (Real Men Read, Career Day) while others represented incremental long-term design efforts (Annenberg Curriculum planning). Some are artifacts that represented ends-in-themselves (Science Coordinator, Real Men Read), while others describe processes that resulted in other artifacts (Middle School Program Development). The collaboration in the design of the artifacts ranged from nearly all school participation (School Improvement Planning) to collaboration between two key actors (Real Men Read, Career Day). While several artifacts resulted from

ongoing, locally designed concerns in professional development (Breakfast Club) and student assessment (Five-Week Assessment), others represented the adaptation of existing artifacts to local uses (School Improvement Planning and Teacher Observation).

All the artifacts are designed to supplement instructional initiatives by creating task structures to order the work of school leadership. For example, Real Men Read is an Adams-designed response to the problem of motivating young African-American men to read. By bringing successful African-American men in to read to the children, Adams leaders hope to send the message that reading and success go together for young men. Like most of the other artifacts described here, Real Men Read has evolved considerably over time. In the initial program, a dozen African-American men were invited to read to young boys for a morning. When in 1999, teachers and leaders questioned whether the benefits of the reading should be limited to boys, the Language Arts Coordinator decided to make it a school-wide event. The Principal and the Local School Council leaders thought that a full breakfast and short talk before the Real Men Read program would be an excellent opportunity for community outreach, inviting the men into the school could lead to deeper, on-going relationships between the men and the school community. Real Men Read provides a good illustration of how an artifact expands its reach in the context of a community comfortable with collaborative design — the program accretions show how artifacts change as they pass though the hands of local designers.

In the following chapter I have selected the first three artifacts, Breakfast Club, the Five-Week Assessment, and the School Improvement Plan as occasions for developing narratives of practice. I have chosen these artifacts for several reasons:

- First, the review of the data collected indicated that these three artifacts form the heart of the instructional program at Adams: Breakfast Club forms

the locally-designed core of the professional development program, the Five-Week Assessment the core of the assessment program, and the School Improvement Plan provides a comprehensive planning process that offers some coherence to the instructional program. Together these three artifacts seem to represent the key instructional tools used by Adams leaders to shape the school's instructional mission.

- Second, these artifacts are the best represented in the 1998-2000 data collected at Adams. The Breakfast Club and the School Improvement Planning process meetings and discussions formed important and accessible research opportunities, Five-Week Assessment results were mentioned at nearly every formal faculty gathering. These three artifacts were by far mentioned most often in interviews with school leaders, and were most commonly associated with the key instructional leadership tasks of planning, providing professional development, and assessment.

- Finally, these artifacts represent the various efforts of local school leaders to design innovative solutions problems faced by schools throughout the nation. Breakfast Club addresses the problem of establishing *professional community* through professional development by providing a forum to discuss and reflect upon experiments with external research-based methods and ideas. The Five-Week Assessment was Adams response to the pressures of *improving standardized testing performance*, allowing the school community to turn compliance with a mandated assessment measure into an interactive learning opportunity to collectively refine the instructional program. The School Improvement Plan demonstrates *site-based planning* in action, by showing how adaptation of an external artifact can help establish a culture of instructional planning in the school. Adams school leaders used the SIP as a cornerstone for an instructional program

that would unite planning, budgeting, instruction and assessment into a coherent school initiative.

The first round of narrative analysis described here in Chapter 3 results in reconstructed narratives designed to highlight the relevant features of a story in a format recognizable to practitioners. The stories of how these interdependent artifacts came to be and changed over time promises to provide unique insight into the practical wisdom of school leadership at Adams. Together these three artifacts show the different ways which school leaders develop, use and refine artifacts in their practice. As will become clear in the narratives, Adams leaders use problem-setting and –solving practices across the artifacts. Each case uses externally-designed program and policies as occasions for professional development; each case seeks to cultivate in-house expertise as a cornerstone for professional community. Triangulating between the three artifacts will give us a deeper glimpse into the patterns of *phronesis* at Adams that will not only provide good examples of what best practice looks like in action, but will also establish a vantage point from which deeper epistemic claims about effective school communities might be made. The artifact-driven stories of Breakfast Club, the Five-Week Assessment, and the School Improvement Plan highlight how school leaders designed and implemented artifacts to fulfill school goals, and show how the artifacts in turn became both opportunities for further collaboration and catalysts for subsequent framing of design tasks. The construction of these artifact-based narratives is itself an important analytic task – the resulting narratives demonstrated how the *phronesis* of school leadership emerges in stories of how leaders frame and solve problems in their local context. Chapter 4 offers an account of the final step in the narrative reconstruction process by constructing a non-linear multimedia narrative of practice and user-testing it with practitioners within the school and in related positions outside the school.

Figure 7   Breakfast Club DCAM

Resources
- Tradition of collaborative curriculum design around test-related issues
- Willing, like-minded leadership team
- Lead teachers willing and able to take the initial steps
- Experience with University partnerships
- In-house expertise in research on reading and writing practices.

Goals
- Provide meaningful professional development for teachers
- Raise test scores
- Help teachers use research in practice

Problem-Setting
- Develop in-house professional development model
- Develop professional community through professional development
- Give teachers the opportunity to use and reflect upon research in practice

Artifact
Breakfast Club

Strategies
- Not mandatory – avoid the stigma of faculty mtgs.
- The substance of the discussions should sell the program.
- Let the lure of access to practices that improve test scores speak for itself
- Short readings
- Teachers select the readings, and lead the discussions.

Problem-Solving
- Collaborative design process
- Lead teachers work with administrators to select reading and lead meetings.
- Gradual process – provide interesting meetings to increase participation
- Focus on language arts

Constraints
- No district requirement for teacher or administrator coursework
- Limited play in budget or daily schedule for new professional development apart from district-mandated days
- Limited value of university-led professional development program
- Disappointing language arts test score results from early initiatives

Affordances
- Access to current research in reading and writing
- Split-school organization allowed the development of smaller initial group
- Primary school organization helped build community around subject which all teachers teach

3.3 Building Professional Community: the Breakfast Club

A recurrent theme in the data collected at Adams is the importance of professional community as a result of professional development. While it is clear that this is an important goal for many schools (c.f. Seashore-Louis, Kruse, et. al. 1995; Bryk, 1997), it is not as clear how professional community takes hold in a school. The Breakfast Club narrative shows how an artifact emphasized by members of the Adams community acts as both a catalyst and as a consequence of efforts to build professional community around instruction at Adams. The Breakfast Club began in 1995 as a monthly program designed to give teachers the opportunity to consider research within the context of their practice. We will use the Breakfast Club as an occasion for uncovering the *phronesis* of school leadership at Adams by reading the Design Cycle analysis model backwards to disclose the problem-setting and –solving practices of how the leadership team sought to build a sense of professional community at the school.

Figure 7 shows how the DCAM Model was applied to the analysis of Breakfast Club. The features identified in DCAM were used to form the resultant narrative of practice presented in this section. Section 3.3.1 recounts the problem-setting practices which led to the construction of Breakfast Club, while Section 3.3.2 discusses the problem-solving practices that resulted in the establishment and operation of Breakfast Club. Section 3.3.3 describes the artifacts that school leaders claimed to result from the Breakfast Club. Finally, Section 3.3.4 highlights the practical wisdom that can be seen through the analysis of Breakfast Club.

3.3.1 Breakfast Club: Problem-Setting

In developing an account of the way a problem is set, it is important to address the goals the artifact designers thought they were addressing, the internal and external pressures that pushed them toward these goals, and the local constraints that shaped the particular means to address the issue. In the case of

Breakfast Club, the program was designed to create a sense of professional community around reviewing relevant literature in language arts instruction. The path toward this problem-setting involves a situated and complex story of how Adams school leaders came to understand the relation of professional community, professional development and high-stakes accountability testing.

"It wasn't always this way" noted Principal Williams. "There was time when we were working very hard, but not working very smart…we were not using research to inform our practice, we just kept on reinventing the wheel" (110399).[1] Breakfast Club was designed to reacquaint Adams teachers with research on best instructional practices. Williams recognized several key constraints in addressing the issue of helping teachers use research in their teaching. While there were several teachers who already kept abreast of current developments in the field, there were few institutional requirements that encouraged teachers to pursue on-going professional development. Contemporary school-wide professional development efforts, resting largely on expertise from outside the school, proved too intermittent and variable in quality to provide much long-lasting impact on student achievement scores. The principal noted that:

> A lot of times people come in with a set program, and we knew from **** that it was a set program, but it did not really help us, it got teacher's involved in knowing that you have to use manipulatives and knowing that quantitatively you could add something's to your curriculum. It was fun and we did if for a while, but it did not help us (121599).

Further, teachers were not required by the district to take on-going professional coursework. Williams commented that:

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[1] The "110399" convention used throughout the next three chapters refers to the datelabel of the field note from which the quote is cited.

In Michigan we had requirements for teachers to get x number of hours every so many years for re-certification. It was foreign to me that you could have teachers teaching in your building for 20-30 years and they have never been forced to take any courses (113099).

The main consequence for lack of exposure to research on teaching and reading was that Adams teachers kept bumping into problems that researchers had long identified as key issues without necessarily having strategies for solving the problems.

The problem of reinventing the wheel was felt acutely by the administrative team due to the pressure from high-stakes district accountability measures. Recent school-reform legislation held schools accountable for student performance in Language Arts and Math as measured by the Illinois Goals Assessment Program (IGAP). Principal Williams noted that, around 1994, she was able to persuade several university partners of the need to provide on-site, on-going professional development support at the school. At Adams, especially in grades 5-8, a quasi-departmental structure left at least one teacher per grade level to specialize in math. Because of this departmental structure, the school's university partners were able to customize instructional support for individual math teachers, working to help teachers with subject-matter and pedagogical content knowledge development. In addition, the renewed emphasis on Math and Language Arts enabled Williams to establish two new curricular administrative positions in Language Arts and Math/Science. Williams comments that:

After about a year and a half our math scores went up, and they began to really look at what we were doing, and they (University partners) really felt that they understood now that things had to be more personalized for the school (120199).

The university partnerships that helped to address instructional issues in math did not have similar effects in language arts. This may have been because, despite the quasi-departmental subject-matter structure of the school, all teachers were expected to engage in language arts instruction, which made customized instruction much more difficult to provide to over four dozen faculty members. Or it may have been because the challenges of learning literacy were more elusive to changes in instructional practices than learning numeric. In either case, while the school math scores on the IGAP increased, the language arts scores did not show similar improvement.

Williams worked with her Language Arts Coordinator, Gwen Tracy, to address the problem of improving language arts test scores. They set up university partnerships like in math, and began to notice that the math test scores improved not when teachers took classes from external consultants, but when they began to talk to one another about their teaching. "We began to believe in the importance of professional community when we realized that, it wasn't taking classes, but that it was when teachers started talking about their teaching that the scores started improving" (031500). The lack of departmental structures in language arts made it more difficult to pick out certain teachers to spearhead instructional leadership efforts. Tracy began to think of ways to help teachers think that they were in this effort together in order to help them to develop collaborative solutions. The standardized test scores were reported back to the school at both the grade level and the classroom level. Using the results of the test scores at the classroom level created competition and resentment among teachers, and discouraged the formation of professional community. The Language Arts Coordinator commented that:

> I think with the onset of IGAP, when the IGAP was first started it did
> something very interesting that almost forced us to work as a team. …
> (Reporting at the classroom level led us to think) so this one teacher over

here could be a shining star, but if the other two or three were not getting

the same kinds of results then that one teacher didn't look good anymore

because my one score was not enough to pull up the entire grade level.

So, if I want my grade level to get a good score then I need to help these

other teachers pull up to where I am. So, I am very careful when I report

the results of the assessment. I will give them individual room scores.

But when I report it to the entire school, I give grade levels and reports

(031699).

The administrative team's effort to help teachers understand that a collective

increase in test scores was necessary for the school requires that the instructional

leaders put programs into place through which teachers could come to realize how

they were in this together through sharing their instructional practices. Tracy

commented:

We found out that we enjoyed talking with one another, that it was a

benefit. Because we don't have a chance to talk with one another – if you

leave your class and start talking to one another, teachers don't have that

luxury. So this gave them a chance to talk with one another (090601).

Thus Breakfast Club was born as an effort to develop a program in which teachers

create professional community, and have air time to talk with one another, by

coming to feel comfortable reviewing research with one another in the context of

their own practice.

3.3.2 Breakfast Club: Problem-solving

Once the problem was set as a matter of establishing a potent platform for

teachers to share the results of current research in the context of their practice,

Williams and Tracy went about the process of creating the program to address the

problem. Hard-learned experience about the perils of imposing professional

development opportunities from above lead Tracy to consult with a number of

grade-level teachers about how to set up the program. A reflective interview (090601) with several members of the administrative team suggested that:

- Faculty members suggested that the program should not be mandatory, to avoid the stultifying atmosphere of many faculty meetings;

- The substance of the discussions themselves should sell the program — if there was good information provided and exchanged at the meeting, word would get around and more people would want to come;

- It should take place in the mornings, so that teachers would be fresh and ready to entertain new ideas;

- The readings should be kept short, so that teachers would have a greater chance of reading them before coming to the session; and

- Teachers should be able to select the readings, and should be able to lead the discussions.

The administrative team thought that the readings should be aligned with the instructional priorities of the school, particularly in language arts, so that teachers would be reading about issues that they should be practicing in their classrooms. Williams thought that a hot breakfast, paid from her own pocket, would give a clear invitation to faculty members and show that she was willing to make a sacrifice for the program to get off the ground.

With that, in 1996, the Breakfast Club program got underway. Language Arts Coordinator Tracy decided to begin the Breakfast Club in the K-3 building, partially because she believed that a big share of the struggle to teach children to read and write was the responsibility of the K-3 teachers, and partially because she wanted to make the initial meetings small affairs. The discussions would focus on the problematic areas of how to teach reading and writing. As Tracy remarked:

> For the first three years the only thing we talked about was language arts,
> so we just focused on one subject area…it's not that they have

responsibilities for all subject matter, it's that they all teach language arts (090500).

Initially, the program was sparsely attended, of 20+ faculty and staff members in the primary building, only an average of six attended the first year of meetings. Non-participating teachers began to hear talk of the new program, and often listened-in on hallway conversations about the ideas discussed at that morning's meeting. One teacher commented that:

That's true – in the beginning we started off with a few teachers, then in the end everyone started showing up. That's because good things started happening…if you take a child in a group, the child may turn his back if he doesn't want to join in, but when he hears what is going on in the group, he comes scooting near you…that's what it was like in BC, teachers would come out and say "girl, wasn't that good", and would sit out in the hallway and say "oooh, I want to try that". Teacher would come up and say "what are you talking about," and we would say "at the BC this morning" and they would say "well what happened" …after that people would start showing up (090500).

After two years of Breakfast Club, attendance averaged about 75% of the primary school teachers. The features of the program were modified over time to include added incentives for teachers to participate. For example, while the program was becoming a regular part of the Adams schedule, Tracy and Williams would approach teachers to encourage them to lead a Breakfast Club discussion. Attendance increased as the veteran faculty members wanted to find out what was going on as they realized that they would be asked to lead discussions. It was evident that, although the lead discussant had usually prepared a careful presentation for the meeting, many of the teacher hadn't read the articles before coming to Breakfast Club. This did not seem to bother Tracy:

I saw that it was just a few of us, but almost the whole staff comes to BC, and whether they have read the article or not – they are going to get that information. They are going to hear everyone else talk about it. About half the teachers read it, but they all hear about it. Some of the teachers are slow to talk about it at first, but by the end, they are speaking up. And they now want to read the article (090500).

Consequent to the problem-setting aim of Breakfast Club, the important thing for Tracy was not compliance, but participation. Providing an opportunity for teachers to share their expertise with one another in a non-evaluative situation was a key design goal for Breakfast Club. To this end, Tracy, Williams and the administrators who attended Breakfast Club adopted supporting roles, helping to set up the program, and answering questions once the discussion was underway. However, the final five minutes of the session became *de facto* reserved for Williams as an opportunity to share with teachers opportunities for instructional resources in the school. While Tracy described how:

At the end of our meeting, if we brainstorm, or are dreaming about how to make things possible, Dr. Williams comes up with suggestions for how we can make those dreams possible – that's pretty regular (090500).

Another teacher commented that:

We learned that Williams would share information about what was going on in the school, and that made Breakfast Club important. If we didn't come, we would be out of the loop (051900).

Now in its sixth year, Breakfast Club has become an institution at Adams. As student achievement scores have risen 22% in the past four years, Breakfast Club credited by teachers and administrators as a key element in creating the kind

of professional community necessary developing a programmatic, cross-grade level approach to teaching reading and writing in the school (090500).

3.3.3 Iterations of Breakfast Club: Consequent Artifacts

Pressing on locally-designed artifacts allows us to see "inside" the problem-setting and –solving practices that led to the artifact design. In the case of Breakfast Club, we can see how the Adams school leaders understood a connection between professional community, professional development, and the improvement of student performance on standardized test scores. Tracked over time, however, interrogating artifact design allows us to consider several systemic features of instructional leadership practice, that is, to understand the interaction of different components of leadership practice. Tracing a narrative path through a complex situation gives us a sense of how the conflicting goals and agendas are knit together, but showing how this narrative path both creates the conditions for and weaves in and out of other paths gives us a glimpse into the internal system of leadership practice in the school.

The consequences of the Breakfast Club seemed to show up throughout the Adams community. As the program became better attended by Adams teachers, the nature of the discussions spread throughout the school, and several local university research teams came to video-tape the meetings and interview the leaders and participants (090601). The notoriety of Breakfast Club had interesting effects on different aspects of the school's instructional program. In this section, we will briefly consider how the systemic consequences of Breakfast Club gave rise to two further locally designed artifacts in the school community: Teacher Talk and Teacher Leader.

3.3.3.1 Teacher Talk

Middle School Assistant Principal Mercy Richards soon heard of and participated in several of the Breakfast Club meetings, and wanted to develop a similar program in grades 5-8. Teachers there, however, were not as comfortable with the idea of meeting before school, in part because the Middle School program[2] already features a before-school Advisory program during which small groups of students checked in with volunteering teachers. In 1997, Richards worked with the middle-school teachers to design Teacher Talk, a similar program to Breakfast Club that would take place during several of the district mandated half-day in-services throughout the year. Teacher Talk differed from Breakfast Club not only in the time of day, but also in the nature of the readings and the participation of the administration. There were Teacher Talk meetings concerning language arts, but since the Middle School initiative was focused on the social and developmental needs of adolescent children, many of the readings were geared toward untangling the relation between student discipline and classroom behavior. Preliminary analysis of the video-tape and field notes of Teacher Leader meetings reveal how the administrator's role in Teacher Talk was also slightly different from Breakfast Club. While teachers continued to lead the research-based discussions, Richards appeared to take a more active role in the Teacher Talk sessions, serving as a discussion mediator while teachers tended to respond to the readings out of their own classroom experiences.

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[2] In 1992, the Adams administration and faculty decided to develop an informal "school within a school" middle school program in grade 6-8 dedicated to developing instructional practices that would compliment the developmental needs of adolescent children. After several years or coursework in adolescent development coordinated by a local university, the program was launched in 1994 with a teacher-led redesign of the grade 6-8 instructional program. Richards played an important role in designing and developing the Middle School Initiative, and in 1997 was named the Assistant Principal, mainly responsible for the middle school children and faculty.

3.3.3.2 Teacher Leader

The Teacher Leader program replaced several district-designated professional development days with self-designed, teacher led discussions of research on issues that mattered to the Adams community. It is a commonplace that professional development opportunities in "normal school" are often criticized by teachers and administrators alike as too irrelevant or intermittent to make a difference in teaching practice. At Adams, Principal Williams found that reliance upon external partners for professional development was not resulting in improved test scores. In about 1994 she pushed for university-school "partnerships" that would provide consulting-level instructional support to individual teachers. Breakfast Club and Teacher Leader opened up a new opportunity for professional development in the school. In the "egg-carton" organizational model of a school, teacher discourse is primarily directed toward children, with little opportunity (or perceived need) for teachers to interact with each other (Lortie, 1975). An emergent characteristic of Breakfast Club, however, was a cadre of teachers who had experience reflecting upon research and leading discussions about their teaching practice. One teacher commented:

> Before this, I might have been too nervous to do this (present about my teaching). But now, when I get in front of the classroom…it didn't bother me anymore. Throughout the years, it really makes a difference. Because when you are presenting, when you are talking about that article with your colleagues, and they are all accepting you, you realize that this isn't such a bad thing. Before that, when you are closing your doors and nobody is saying anything – you just did your good job and close your door (090500).

Teachers began to talk to one another and to request opportunities from the administration to replace the conventional external partnership professional development sessions with Adams teacher-team presentations. As seen above,

Williams and Tracy had experience with customizing professional development to fit the needs of faculty. Now the opportunity arose to design a professional development program for and by teachers.

While Teacher Talk had opened the door of supplanting external professional development presentations with teacher-led discussions, Breakfast Club had created a group of teachers willing to speak up about their practice. These factors provided the impetus for the Teacher Leader program at Adams. Tracy commented that:

> Out of this (Breakfast Club) comes Teacher Leader, as an extension of it. After we read the research, there were teachers who wanted to try whatever we were reading about. They became experts, and they became teacher leaders as they reported back on what they found interesting in their classrooms (090500).

Teacher Leader is currently a key aspect of the professional development program at Adams, as well as a frame for the school professional community. Veteran teachers are expected to present some aspect of their experimentation with research in their teaching, while novice teachers are encouraged to think about what they might like to present by the end of their second year.

Pressing on Breakfast Club using the Design Cycle Analysis Model (c.f. Section 2.1) revealed several characteristics about the practice of the leadership team at Adams school. Here we will briefly discuss how the components of the model were revealed and led to our narrative account:

The *goals* of Breakfast Club demonstrated the multi-dimensional nature of how artifacts are developed and used in practice — Breakfast Club was designed as a feasible program that would reacquaint teachers with relevant research in reading and writing, helping teachers to "work smarter, not harder" in their efforts to help students read and write better. A persistent concern that framed these

practices was the abiding concern to improve of stubborn student test scores in language arts on district standardized tests.

There were significant *constraints* in designing Breakfast Club. The school calendar did not provide time for extra professional development meetings, and the union contract did not require tenured teachers to pursue professional development opportunities beyond those specified in the school calendar. Past, intensive professional development efforts to work with external consultants had not resulted in demonstrable test score gains. Further, teachers and administrators with schedules already stretched by teaching, committee work, student advising and extracurricular obligations may also have been unwilling to participate in yet another time-consuming program designed to improve their teaching. Somehow, Breakfast Club had to lure participants through promised benefit rather than through mandated attendance. The Adams community also relied upon the constraint of limited student improvement in language arts testing as a way to focus initial Breakfast Club meetings.

The school community could rely upon several key *affordances* in the design of Breakfast Club. First, the school leadership team recognized that improvement of student test scores would not result from a traditional professional development model of external consultants providing intermittent instruction. Principal Williams realized that long-term gains in student test scores would come mainly when teachers had the opportunity to talk with one another about their teaching, and that Breakfast Club would be an opportune vehicle for such conversations. Communal expectations for tests score improvement were set up by, for example, public grade-level, instead of classroom-level, reporting of standardized test scores. Second, several teachers had prior positive experiences in collaborative curriculum design, which may have prepared them for the potential of discussions at Breakfast Club. This helped to form a core group of teachers and

leaders to guide the initial meetings through sparse attendance and faculty indifference.

Breakfast Club resulted in several significant *resources* for the Adams community. It provided an opportunity for a school-wide professional community around language arts instruction, which, in turn, was credited for recent student test score gains in reading and writing. It helped make teachers take ownership of their professional development, as seen through the flourishing Teacher Leader and Teacher Talk programs. And the documentation of Breakfast Club practice has provided Adams school leaders an opportunity to reflect on their practice, discerning patterns and making sense of instructional initiatives that were originally born in the heat of practice. As one school leader commented after considering a narrative reconstruction of Breakfast Club: "I guess I didn't realize that we had done all this. When we were doing it, it seemed like no big thing, but I guess it all adds up" (090500).

3.4 Standardized Testing: the Five-Week Assessment

The past ten years have seen a dramatic increase in using standardized tests as a means of accountability in urban public school systems (c.f. Baron and Wolf, 1996). School leaders can differ widely in their reaction to how standardized tests impact the instructional program, ranging from viewing the tests as an unpleasant (and unimportant) imposition on the normal instructional program to radically reshaping classroom practices to meet the achievement requirements of the exams. The pressure is especially acute for schools in traditionally low-performing districts, where discretionary money and punitive measures are directly tied to standardized testing performance. School reform legislation in 1988 and 1996 in Chicago has tied school-level incentives and punishments to improvements in math and language arts scores of the Iowa Test of Basic Skills (ITBS). There has been some controversy, however, about how the data generated by standardized tests can inform the school improvement process. In Chicago schools, reports

generated by the ITBS have proven of dubious value in helping school leaders and
teachers reform instructional practices (Bryk, et. al. 1998).

Figure 8   Five-Week Assessment DCAM

Goals
- Supplement summative district data with formative data
- Balance test-performance with developmental needs
- Use data to inform collaborative planning process

Strategies
- Make the program the responsibility of one person
- Use intermittent testing to keep instructional program on-track
- Tie assessment practices to planning and curriculum processes*
- Use program as data-driven control mechanism to direct instruction

Resources
- Tradition of collaborative curriculum design around district-mandated assessment issues
- Willing, like-minded leadership team
- Breakfast Club as an accepted forum to discuss results
- Tradition of in-house accountability measures
- In-house expertise in research on reading and writing practices.

Problem-Setting
- Develop reliable source for formative data to supplement district summative data
- Use collaborative design to encourage staff acceptance
- Deepen reliance on in-house leadership

Problem-Solving
- Collaborative initial design process;
- Subsequent centralized administrative management
- Lead teachers work with administrators to design initial program.
- Group and individual discussions with teacher to review results

Artifact
Five-Week Assessment

Constraints
- District-mandated performance standards
- Already high commitment to external assessment practice that take from instructional time
- Disappointing language arts test score results from early initiatives

Affordances
- Established grade-level meeting structures
- Administrative team structured to address instructional improvement
- Teachers accustomed to regular standardized test cycles

Unpacking the development of the Adams' designed solution to the
assessment issue – the Five-Week Assessment program — provides insight into

how the practices of curricular design, performance assessment, and instructional practices are woven together as system of instructional leadership at Adams. Figure 8 describes how the DCAM model was used to organize the data relevant to the Five-Week Assessment narrative of practice. The reconstructed narrative of the design, implementation and iteration of the Five-Week Assessment program begins in section 3.4.1, which provides a sense of context by describing what the five-week-assessment is, and outlining how the program works, Section 3.4.2 discusses the problem-setting practices that resulted in the Five-Week Assessment, and 3.4.3 considers the problem-solving practices through which the program was implemented and subsequently evolved. Finally, Section 3.4.4 considers other designed artifacts in the school which have supplemented or have spun-off from the Five-Week Assessment.

3.4.1 What is the Five-Week Assessment? How does it work?

The Five-Week Assessment program was designed as a means to provide meaningful formative data to teachers and leaders about student progress toward improved performance on the summative district standardized tests. At Adams, the ITBS and the new Illinois Standardized Achievement Tests (ISAT) presented a challenge for instructional leadership to reshape the instructional program to aid student performance on the district-mandated tests. As a part of Illinois District 299, Adams teachers and leaders are held accountable to demonstrating student test score improvement as a measure of school performance. However, the culture of professional community and collaborative design, resulting in part from innovations such as Breakfast Club, has led Adams school leaders to frame the problem of reshaping the school instructional program in terms of collaborative artifact development.

The artifact discussed here, the Five-Week Assessment, provides a glimpse into the practical wisdom of how the Adams community adjusts to the demands of

standardized testing. The Five-Week Assessment is a locally-designed artifact intended to provide Adams leaders and teachers with formative data to guide the instructional program toward helping students perform better on standardized tests. As mentioned in section 2.6 and in 3.4, student improvement in language arts achievement had proven to be an especially difficult challenge for Adams teachers and students. Consequently, the Five-Week Assessment program was originally built around measuring language arts instructional and learning. In its current state, the Five-Week Assessment program tests all Adams children every five weeks on a battery of skill assessments designed to gauge student performance on upcoming exams. As a result of four years of iterative design practices, each assessment in the program has been reverse engineered from an item-analysis of the ITBS (and now the ISAT) and customized to fit with the school-wide instructional program in language arts.

The Five-Week Assessment program is in its fourth year at Adams. Every five-weeks, teachers throughout the school conduct an 1-2 hour assessment with their students. A team of teachers and leaders collect and grade the assessments, and consequently discuss the results with teachers and plan intervention strategies for under performing classrooms. The topics of the assessments are coordinated by a team of language arts coordinator Gwen Tracy in the primary grades, and by assistant principal Mercy Richards in the middle school. Each year a schedule of assessments is developed for the upcoming school year. Table 3 describes the assessment schedule for k-3 classrooms for the 1999-2000 school year. Initially, the assessment was intended to prepare students for the ITBS exam, and the assessments focused on multiple-choice questions and ITBS practice exams. With the emergence of the ISAT in the past two years as a rival accountability measure, the assessment program has shifted toward also testing children for narrative, expository and persuasive writing and open-ended questions.

Graphic organizers, addressed by the first two weeks of the assessment plan, now play a significant role in helping students to read with comprehension. The Adams Language Arts program uses a graphic organizer called "fishbone" to help students identify the main ideas, supporting evidence or examples, and key implications of plot structures in stories. (A copy of the Fishbone worksheet is provided in Appendix 1) Evaluating student reading through graphic organizers helped leaders and teachers understand where student were falling short in their comprehension. Helping teachers to understand how to use and implement the fishbone provided another professional development design task for the language arts program. There were several presentations on the fishbone during Teacher Leader and Breakfast Club in the 1998-99 school year, which allowed teachers accustomed to using graphic organizers to share their expertise and experience with colleagues.

Once the assessments are completed, Tracy, Richards, and Williams meet to interpret the testing data and to decide on the appropriate action agenda. Over the past several years, we have had several opportunities to document the outcomes of these meetings. Data from the Five-Week Assessments are used to address grade level or individual teacher concerns. On one occasion, Principal Williams met with the second grade teachers to discuss the results of the first round of Five-Week Assessments. The resulting discussion focused on how homework could be used to make sure students were working appropriately. Williams commented that "you all need to be focused on the same standards, and your classrooms need the same type of intellectual work" (102099). The ITBS exams take place during the third grade, and Williams directed her comments to helping the second grade teachers prepare students for the third grade exams:

This is a concern in the second grade because we know what's going to happen in the third grade…The third grade teachers complain that their

(new third grade) students are not used to working through the afternoon. Third graders need to be able to write longer passages. You need to prepare your students for the third grade expectations (102099).

On another occasion (021400), the African-American Heritage teacher, Virginia Baize described how a middle school version of the Five-Week Assessment program revealed that the 5th grade students were not doing very well in the science areas to be tested on the exam. Since science did not play a very big role in the 5th grade instructional calendar, either for classroom time or in resources, the teachers often addressed science issues through the reading program. Ms. Baize told Principal Williams about the problem, and Williams suggested that Baize come up with a program to help get the 5th grade teachers up to speed. According to Baize, the 5th grade staff was having a difficult year. Of the four classrooms, only one was staffed by a veteran 5th grade teacher. There was one 3rd year teacher transferred from another grade level, one brand new teacher and a permanent sub in another classroom. Baize commented that: "looking at the 5 week assessment saved our butts because we could focus in on helping the students learn the science content they needed to do well on the test" (021499). As a way to prepare the children for the test, Baize worked with teachers to:

> use practice tests with the children to help make them comfortable with the test format — it was the first year the students didn't waste time with trying to figure out how to read the test, and got down to what the test was all about (021900).

3.4.2 Five-Week Assessment: Problem-setting

A key aspect of practical wisdom, as highlighted in section 1.5.2, is apperception, that is, what to see a problem "as." In the case of the Five-Week Assessment, we have seen how Adams leaders saw the problem of preparing students for standardized exams "as" an opportunity to collaboratively design an

artifact that would provide formative data on a summative process. The program not only provides the data, but, in the hands of Adams leaders, establishes an opportunity to use data to address professional development and instructional remediation issues. In the following section, I will use the problem-setting process that led to the Five-Week Assessment program as an occasion to investigate the practical wisdom of how Adams school leaders understand assessment practices. I will discuss first the key *goals* around which the problem was framed, then second the *resources* the Adams community seemed to rely upon in the problem framing process.

3.4.2.1 Goals

There are several key goals around which the problem-setting process was organized at Adams. The first goal seemed to *maintain the balance between the improvement of student performance on district-mandated measures with ensuring proper attention to the affective and developmental needs of students*. Having teachers organize instructional practices around teaching to the test might address the standardized testing issue, but might also lead teachers to focus too closely on teaching to the test, and lead them to ignore the developmental needs of students. According to Principal Williams, instructional leadership depends on helping the school make progress with respect to student achievement:

> We set the expectation that our school will make progress, and we try to provide the structure, the professional development, the monitoring of instructional program, so that we can reach our goals. We expect to meet our goals, and we set goals that we expect to meet, and excellence has been the standard. We don't accept mediocrity. As an instructional leader here, I would not be comfortable, I would not be satisfied, if our school did not make continual progress. If we don't make the progress we expect to make over a given time, then we are looking at answers and at

issue that would probably help us to improve. So we don't just sit back with the status quo and say that's ok, the staff is happy, the kids are happy. Well I'm not happy, because we are not making progress (121599).

While district-mandated tests are a measure of instructional progress, Williams is careful to distinguish the importance of providing a good education for Adams children to the practice of teaching to the test.

In terms of *our* own individual standards of the school. Yes we have to make certain district standards, we have to meet certain state standards, but since we are in the business of educating children, our children are making progress academically. *So everything that we do is based on the fact that we are here to insure that our children are learning and for no other reason.* (italics indicate original emphasis) That's why we are here, that's why we are being paid, and everything we do is for that reason (121599).

The larger vision for educating students at Adams includes district-mandated educational outcomes, but also includes a commitment to educating the affective and creative aspects of students. In the words of Assistant Principal Richards:

And then too its not a one sided kind of affair where we just focus on academics, and that's it. We try to focus on the whole child and provide all of those needs, the social, emotional and academic and physical, and try to be a nurturing, caring and provide the educational needs that the children need as well. All of those things together have really made a difference with us. That's why I keep going back to those classes, because that nurturing and that caring, when we focused on the academics part, nothing was happening at first, but when we brought in that nurturing and that caring, then things really started to happen, things just did a complete turnaround. That's what made a difference here (121599).

The second key goal seemed to involve *seeing the assessment process as data-driven*. Early on, Adams seemed to see this as a problem as a matter of gathering data about the instructional process to provide regular feedback on the progress teachers and students were making toward improved ITBS performance. As demonstrated in section 2.6, Adams school has made significant gains in district mandated standardized tests over the past ten years. This progress is interpreted as an important measure of progress in student achievement at Adams. While the ITBS was used by the district and the school to determine student progress in math and language arts, teachers and administrators had little sense of the progress they were making toward improvements in achievement until the test results were made available at the end of the school year. As one teacher described:

> We realized that the tests themselves didn't give us much information
> about what we could do to improve our scores – mainly because we
> received the results well after we could do anything about it. We thought
> about a more frequent assessment program, say every nine weeks, that
> would help us tell where the children were (021700).

During the 1996-97 school year, Williams discussed the issue with her administrative team, and, together with the Language Arts Coordinator, invited faculty members to help develop a formative assessment program that would provide feedback on the school's progress toward ITBS improvement. The final goal seemed to point toward how Williams and the administrative team *framed the problem of adjusting to standardized test scores as a matter of collaboratively designing an artifacts*, in this case, a program, that would provide formative data on the testing process. Collaborative program design draws the relevant audiences into the problem-solving process, helping to create a program that meets the data collection needs of school leaders while remaining practical enough for teachers to implement into their instructional plans. In the case of the Five-Week Assessment, the program design process would draw on teacher expertise of practical

assessment techniques, helping the school community to draw on their own expertise without having to reinvent the assessment wheel. As will become clear in the discussion of the problem-solving process below, an assessment program independent of either current teaching or professional development practice would have little formative impact on the instructional program.

3.4.2.2 Resources

In framing the problem that led to the Five-Week Assessment program, Adams school leaders could draw upon considerable institutional resources. Indeed, as I argued in Chapter 2, the practical wisdom disclosed through the analysis of artifact development and use reveals the network of experiential and material resources school leaders rely upon in framing and solving complex problems of practice. In many cases, the resources used to frame the current problem cannot be understood separate from the experiences that gave rise to the resources. This is an important feature of *phronesis* — as a situated, experiential form of knowledge, the resources brought to bear on problem-setting often take the form of a body of past experience that situate current understanding. In the case of the Five-Week Assessment, Adams school leaders utilized both material and experiential resources in framing a viable solution to the assessment problem. There were several key experiential resources that seemed to situate the problem-setting process. Adams school leaders had experience *using data-driven methods to assess instructional performance*. As a Chicago Public School, the Adams faculty had considerable experience in using testing data as a measure of student performance. In addition, Adams' leaders prior experience as researchers, and their consultation with university experts put community members in direct contact with researchers who collected and analyzed data to validate claims about best practices in teaching. As Principal Williams commented:

Initially we did not know what this whole thing was going to be about, and we had to kind of frame it ourselves, and with Dr. xxxx, our university partner, we started the Five-Week Assessments, and we still do those now to collect data on student learning (032299).

Adams school leaders also had considerable experience in *using collaborative design as a means to solve current problems*. In an interesting interview, Principal Williams reviewed the practices of collaborative design that reached back to her first days at Adams nearly a dozen years before. After coming to Adams, Williams found a gap between the faculties at the primary (K-3) building and the main (4-8) buildings. Williams started "Bridging the Gap" as a program to help teachers talk to one another. These efforts led to programs designed to align curriculum across and between grade levels, and ultimately led to programs such as Breakfast Club to discuss and experiment with new practices. This experience seemed to teach the Adams leadership that collaborative design a) helped surface viable solutions to complex problems, and b) helped to create ownership in the resultant artifacts. This tradition of collaborative design can help explain how the Five-Week Assessment artifact came into being.

Another, perhaps more subtle, experiential resource that Adams leaders relied upon seemed to be the sense that *district mandates of accountability are the legitimate measures of student progress*. While Richards' comment from p. 24 reminds us that the accountability measures were not exclusive measures, they are also to be respected as legitimate measures of student learning. I did not experience many debates about the merits of the ITBS or the ISAT as measures of student performance, rather, I heard more about the means that the school would take to insure improved student performance on the measures.[3] There seemed to

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[3] To be sure, there were several comments about the invasiveness of the testing practice, and about the amount of time teachers had to spend in test related activities. However, these comments

be an implicit acceptance of the status quo that led Adams leaders to focus their energy toward establishing solutions rather than questioning the necessity of the measures. The accountability measures seemed to be accepted as a legitimate aspect of the instructional situation, and, importantly, used as an occasion to further school leaders' interests in developing effective solutions through collaborative design.

The material resources used in the setting of the Five-Week Assessment problem included the past assessments and curricular programs used to inform the design process. An important material resource was the capital used to finance a coordinator position in Language Arts for Gwen Tracy, which in turn freed up administrative resources to take a planful, rather than a reactionary, approach to the assessment issue. Since, as we have seen above, student performance on the language arts exams provided a special challenge

for Adams, the language arts coordinator took the leadership in developing and implementing the Five-Week Assessment program. The story of Tracy's position, however, originates in Principal Williams commitment to create institutional structures in order to set a high priority for instructional leadership in the school. Early in her tenure, Williams made a commitment to establish herself as an instructional leader by using the discretionary money available to the school to set up auxiliary administrative positions to handle the managerial and student affairs issues that so often divert a principal's attention. In Williams words:

> …if I am going to be a good instructional leader I have to find ways in
> which I can have other people responsible and delegate those
> responsibilities, and I still get involved if it is a key issue (032299).

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seemed more generic than specific, targeted toward time allocation issues rather than the merits of these particular tests. I did not hear a criticism of the district testing practices from any positional leader in the school.

Adams' full-time disciplinarian with an assistant, two Assistant Principals, full-time special education case-worker and guidance counselor deflect much of the managerial work from Williams, allowing her to focus much of her time on the instructional program. Tracy was hired ten years ago to bring special attention to the language arts program, and together Tracy and Williams have headed the development of Breakfast Club, the Five-Week Assessment, and other key instructional programs related to language arts instruction at Adams. Tracy's abilities to provide a cross-school focus on language arts enables interested teachers to rely upon her as a focus for language arts instruction — Tracy's office in the primary building has become a hub for teachers to use and discuss different instructional materials. The materials used to compose the Five-Week Assessments were drawn upon tests culled in Tracy's office, and her ability to draw together and implement the Five-Week Assessment have been critical for the program's effectiveness.

3.4.3 Five-Week Assessment: Problem-solving

At Adams, the issue of helping the teachers to meet the demands of standardized testing was framed in terms of developing a program to give formative data that would guide the instructional program toward the summative measures of the ITBS. This problem-setting led to a problem-solving process that in turn resulted in the Five-Week Assessment program. The problem-solving process began with several leaders interested in completing an item-analysis of the ITBS to determine the areas of student needs.[4] In the fall of 1996, language arts

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[4] This themes of reverse engineering the test to develop instructional support materials came up several times in our experience at Adams. In 1995-96, Former Assistant Principal Joanna Schooler did an item analysis of the ITBS to develop support materials for 3rd and 5th grade math teachers and classrooms (030299) Later, African-American Heritage Teacher Virginia Baize and Assistant Principal Mercy Richards worked to find out what were the key issues in helping students to succeed on the ISAT. The ISAT focused on short written answer questions that are different from the ITBS questions. Baize and Richards graded sample answers to see whether they understood the rubrics used by the ISAT. Baize remarked "One answer I would be too hard on, then Mercy would

coordinator Gwen Tracy led a group of teachers and administrators to break down the language arts test into chunks that could be cumulatively tested throughout the school year, while (then) Assistant Principal and Math/Science Coordinator Joanna Schooler conducted a similar process for the math exam. Dr. Williams discussed the issue with her administrative team, and, together with the Language Arts Coordinator, invited faculty members to help develop a formative assessment program that would provide feedback on the school's progress toward ITBS improvement. During the design process, one teacher described how teachers and school leaders

> (T)ook a serious look at the kinds of literacy and math skills our children were tested on in the ITBS, and designed the program backwards from there so that when the student got to the test they would know what they were doing (021700).

Principal Williams asked for volunteers to develop a testing program to be conducted across the school to provide formative data for teachers and students. This data would be used to point out problem areas in the instructional program so that remedial teaching help could be brought to bear before the standardized tests.

The initial assessments were in place and implemented in the fall of 1997. However, the exams based exclusively on the item-analysis of the ITBS did not have the intended effect because, as noted by Tracy, "the assessments were not related to what was going on in the classroom" (040400). Apparently, the teachers not involved in the design process began to perceive the tests as an interference with their instructional time. When the data were collected about student performance in language arts, Tracy remarked that "the teachers did not know how to integrate the information into their teaching" (040400). Reverse-engineering

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be too hard. After a while we came to understand what they were looking for — we graded them

the ITBS to develop an intermittent testing schedule was not enough — without an integrated approach to curriculum development, the Five-Week Assessment would have little formative impact on the language arts program.

By mid 1997, in addition to the press for formative assessment input, there were other factors in the school that created a need for an integrated approach to language arts instruction. Prior professional development focused on aspects of the language arts program bore little fruit in terms of school-wide student performance. Selected classrooms performed better on some aspects of the exam, but there did not seem to be a concerted increase in scores across the school. As we have seen, Breakfast Club began to create conversations about best practices as well as developing a forum to try out and share new instructional techniques. By 1998, the Breakfast Club, Teacher Leader and Teacher Talk created a group of teachers interested in adopting a common instructional program in language arts to provide a common benchmark for assessment and instructional practices in the school.

In the fall of 1998, several primary school teachers attended a workshop by Pat Cunningham about an integrated language arts program called the Four Blocks of literacy.[5] The Four Blocks program served as a catalyst to unite the assessment and professional development program. On the one hand, the Breakfast Club and Teacher Leader meetings of 1998 and 1999 were dominated by teachers reporting on and experimenting with different elements of the Four Blocks program. Tracy and members of the newly created Language Arts Committee adapted aspects of

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together and discussed them until our scores would agree" (021400).

[5] The Adams teachers and administrators decided to implement Pat Cunningham's *Four Blocks* of Literacy, a comprehensive literacy program focusing on guided reading, working with words, self-selected reading, and writing. (c.f. Cunningham, P. M., Hall, D. P. & Defee, M., (1998)) . Since adoption, the framework has been used in a variety ways across all grade levels in the school.

the Four Blocks program as cornerstones not only for a school-wide instructional program, but also as a touchstone for the Five-Week Assessment program.

Tracy commented that "at first, the (Four Blocks) book did not seem very exciting, but after a while, it turned out to be exactly the program we had been looking for" (040400). This raises an important issue in understanding the practical wisdom of program adoption. Because of the accountability pressures, the need for formative assessment, the need to build a common base for instructional practice, and the experience of collaborative curriculum design, the Four Blocks program emerged as a viable candidate to serve as a cornerstone for teachers and leaders in the language arts program. The program answered what William James (1893; 1948) called "felt need" in the school community for a comprehensive approach to language arts teaching. Without the felt need, that in turn was composed by the prior experience of the school community, the Four Blocks program might have been another external program imposed on the school culture.

That is not to say that the Four Blocks program was universally embraced at Adams. Several teachers were reluctant to change their teaching practices to accept the new program. In one case, Principal Williams used a refusal to participate in the Four Blocks program as an occasion to design remedial professional development program for the teacher. In another case, a veteran teacher, two years from retirement, with an established record of student performance was allowed to bypass several features of the program in favor of her established practices. Still, as a program key to both the assessment and professional development practices of the school, the Four Blocks program received the blessing of school leaders and many teachers as the new cornerstone for the language arts instructional program.

The problem-solving process that resulted in the Five-Week Assessment also pushed school leaders to design a context within which the data provided by the assessment would make sense. The problem-solving practices of designing the Five-Week Assessment program revealed a gap between tested and taught practices. Prior inclinations to establish a standard language arts program were strengthened by the need to provide meaningful formative data to guide the assessment process. This gap was noticed by leaders and teachers alike, and when the time came for opportunities to fill the gap, the Four Blocks program was recognized, adopted and by and large accepted as satisfying a felt need by the school community. The Five-Week Assessment design process thus created a pressure to design a context, that in turn fueled efforts to adopt a curriculum against which the assessments could be measured. Pressing on the design process of the Five-Week Assessment thus reveals the genesis of a network of interrelated practices and program that, together, help to show an aspect of the practical wisdom of school leadership at Adams.

3.4.4 Five-Week Assessment: Iterations

Analyzing the problem-setting and problem-solving processes involved in the development of the Five-Week Assessment has highlighted several aspects of the practical wisdom of school leadership at Adams. The subsequent iterations of the program through implementation and use reveal how the Five-Week Assessment has become a generative aspect of the task network of leadership at Adams. This section will highlight several features of how the Five-Week Assessment program either created opportunities to deepen existing practices, such as the Language Arts Committee, administrative in-class modeling of instructional practices, or led to spin-off programs and practices at Adams, such as test rallies, that reveal further patterns of the *phronesis* of school leadership at Adams.

3.4.4.1 Language-Arts Committee

Initially, Language Arts coordinator Tracy and Assistant Principal Richards graded the Five-Week Assessments for the entire school – Tracy taking the primary grades, and Richards taking the middle school. The administrators took on this task so that each leader would get a first-hand sense of the achievement patterns of the teachers and students for which they were responsible. Soon the task became so time-consuming that Tracy claimed designing, grading and analyzing the assessments took up almost half of her work time (031699). Tracy considered the existing Grade Level Committee program as a way to distribute the load. The Grade Level Committees were an existing program of school-wide subject-matter faculty committees which met occasionally to discuss matters relevant to the subject. Each grade level had representatives on every committee, which included:

- Language Arts
- Math
- Science
- Social Studies

- Academic Recognition
- Discipline and Attendance
- Social Life

The committees seemed to draw faculty members particularly interested in each subject matter as members. In addition, each committee seemed to have a main task for the year — for example, the science and social studies committees had annual Fairs, while the Academic Recognition and Discipline and Attendance committees had end of the year recognition programs. The main responsibility of the Language Arts Committee was to prepare the Language Arts component of the School Improvement Plan (more about this in Section 3.6). In 1999, Tracy and Richards began to talk with Principal Williams about using the Language Arts committee as a vehicle for both distributing the designing and grading work and of including faculty leaders in language arts in the Five-Week Assessment process. After meeting with faculty members in the spring of 2000, Tracy decided to

expand the role of the existing Language Arts committee in the 2001-2002 school year to include grading and designing aspects of the Five-Week Assessment, thus creating a broader forum of participation for faculty members in the instructional evaluation process.

3.4.4.2 Administrative Modeling of Instructional Practices

The Five-Week Assessment also creates opportunities for leaders to discuss and model targeted instructional practices. Adams leaders have had a long tradition of hands-on modeling of instructional practices for teachers. It is not surprising that the leaders at Adams are capable of in-class instructional modeling — Principal Williams consciously invited many of the leaders into their current positions because of their instructional prowess (cf. interview with Williams 032299). What may be surprising is the willingness of administrators to model instructional practices in classrooms for teachers. Weick (1976) argued that the instructional and supervisory responsibilities in many schools form a loosely-coupled system, implying that the control of the practices of teaching are largely left to the discretion of the teachers. Research in instructional leadership from the 1980s (cf. Greenfield, 1987) suggests that school leaders take a more cohesive view of instructional practices in the school, acting more as lead teachers than as managers. Principal Williams' career itself parallels this transition from hands-off to hands-on instructional leadership. Her initial career led her to pursue an advanced degree in administration:

> (I)nitially the thing is to be a good administrator, to be organized, to make your school run well, to run a tight ship… Before I became a principal I started a Doctoral Program at University of xxxxx in the administration program, and my goal then was to be move in administration from principal possible or ultimately becoming a District Superintendent or regular Superintendent. (After a 2 or 3 year absence) I had the

opportunity to go back to University of xxxxx, but by that time….a lot of things were happening, so I ended up going to yyyyy University in curriculum and instruction. My philosophy had changed, and I think that you can say things happen for a reason in your life, and don't always understand them, I feel that a principal now has to be an instructional leader first (032299).

While in the research we conducted at Adams, we neither witnessed nor heard of Williams directly modeling instructional practices, we did have the opportunity to talk with several other administrators about their experiences modeling best practices for students.

The Five-Week Assessment process provided an excellent opportunity for administrators and teacher leaders to model instructional practices for their colleagues. The assessment system, when built into a prescribed curriculum program such as the Four Blocks, provides feedback for which teachers and students are having problems with instructional practices. We had an opportunity to observe a school leader model an aspect of the language arts program, the Fishbone graphic organizer, at the request of a veteran teacher. In the case of the Fishbone, there were several teachers who did not understand how to use the graphic organizers with students. On one occasion, Assistant Principal Mercy Richards demonstrated how to use the fishbone method to the class of special education teacher Ezra Johnson.

In the fall of 1999, Mr. Johnson's students were identified as not performing up to their ability in the initial five-week reading comprehension assessment. After attending a Teacher Leader meeting on the fishbone method in October 1999, Mr. Johnson approached Ms. Richards for additional help in modeling the instructional techniques of the fishbone in his classroom. Richards used the Fishbone to analyze one of James Fennimore Cooper's "Leatherstocking

Tales" with Johnson's students. Johnson sat through the class as one of the students, working in groups with the students and asking questions. After the class, Johnson commented that:

> The beauty about Adams is that you never have to feel like you can't do something. The fishbone is something I never felt comfortable about, and I wanted to get an idea about how to present it. I asked (Ms. Richards) to come up at her convenience, and I sat with the class to see how it was done (111399).

When asked about what was most helpful about Richards performance, Johnson replied:

> Her mode of questioning, putting those questions to the kids. She has a way of getting everybody involved…I've tried a couple of things out already, I read them the story first, and then I told them to read it silently. That way, if there are any words they don't understand, they won't get stuck after my reading (111399).

Finally, Johnson remarked that about how comfortable he is with Richards (and other administrators) coming in to teach in his room.

> I have known (Mercy) for a long time, I used to teach right across the hall from her. But even the new teachers who are young enough to be our daughters feel comfortable asking for this kind of help… I asked her to come up (to my classroom) because I didn't feel comfortable (with the fishbone). As busy as they (school leaders at Adams) are, they are always willing to take time to help (111399).

While the data collected during the 1998-2000 school years show this single example of administrative modeling of teaching practice, several school leaders indicated that it was a more pervasive practice in the school. In a reflective interview, Richards commented that, although her schedule is crowded with other

administrative tasks, until 1999 she still taught a daily class at Adams. About once a month Richards claims to help a teacher to work through a concept in a classroom, either by teaching the lesson for the teacher (as in the Johnson example) or by observing the teacher in the classroom. Former Assistant Principal Joanna Schooler noted that she taught and co-taught many classes in her efforts to help teachers to effectively use manipulatives in their mathematics classrooms (030299). And newly appointed Science Coordinator Tim Zacharias considers modeling problem-based instructional practices in science for and with middle school teachers an important aspect of his daily practice (041400).[6]

3.4.4.3 Test Rallies

Preparing students for standardized testing on the ITBS each May required more than the development and use of formative testing data. From their experience working with elementary school children, Adams leaders understood the importance of affective motivation to excite the children about the upcoming process. Like many other schools, Adams has a long tradition of using student assemblies as a way to generate interest among students. Richards describes how:

> Every year we put on a series of assemblies. We start in December with a
> Christmas assembly. We do a Martin Luther King Assembly. We do a
> black history assembly, and we do a Spring assembly. Just to break the
> monotony of the classroom and have the students to actually get up and
> do performing kinds of arts kinds of things. A lot of them have talent,
> and they don't really know what their talents are. Well this is a way of us
> trying to you know, helping them to realize hey, I can really speak well or

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[6] While there are several indications that senior faculty member consider modeling instructional practices as key features of their roles as instructional leaders (c.f. 031500; 032200), we did not have the opportunity to either observe these practices in action

I can really sing well, or I can write a play. And it's really bringing out

the performing arts in the students (021999).

Annual test rallies were developed to supplement the Five-Week Assessments as way to prepare students for the ITBS exams. However, in the test rallies, it is the faculty members who get a chance to show off their skills instead of the students. Beginning in 1998, Adams teachers and leaders participated in a test week rally that brought students and teachers together for a twenty-minute cheerleading assembly to kick-off the week-long ITBS cycle. Richards describes the purpose of the rally:

Well last year… we began to have a test rally. You know pep rally. A

day or two before the test is actually administered, we get all the students

in the auditorium and we just have a ball. And we get pumped up for the

test. We go through the test rules, tell them to eat breakfast before you

come in. Get to school early so it won't be an anxiety attack where you

have to rush in and just sit as soon as you're seated, you're right into the

testing. So we go through all of these kinds of procedures with the

teachers and with the students so that when they actually get to it they are

relaxed (021999).

Adams school leaders took leading roles in the rallies. Principal Williams acted as the emcee of the assembly, which featured about a dozen faculty members in skits involving characters such as "Stella Sleepsalot" who give inspirational messages to the kids about getting enough sleep, being on time, and following the rhythm of the test so they don't give up. Each assembly is built around a theme song, such as R. Kelly's "I Believe I Can Fly" or the Supremes' "Ain't No Mountain High Enough" used as an opportunity to develop inspirational messages that are posted throughout the school. The assembly concludes with a faculty rap about keeping up with the test and not letting it beat the students. After the assembly, the

students are dismissed early, and teachers participate in an in-service about test procedures for the upcoming week (042099).

The Five-Week Assessment was designed to provide meaningful formative data to inform the progress of the instructional program toward standardized test improvement. A key part of the *phronesis* of instructional leadership at Adams consists in the perception that formative data is needed to guide the program together with building the capacity to develop meaningful sources of information. Using the Five-Week Assessment as an opportunity to discuss the *phronesis* of assessment practices enables us to see how the intention to build formative data sources developed over time. Initially, the program yielded disappointing results as many teachers neglected to integrate the assessment into their instructional practices. As greater coherence developed, however, with the adoption of a standard curriculum in language arts, the Five-Week Assessment was better able to measure student success in terms of implementation of the commonly accepted Four Blocks. Thus we can see how the Five-Week Assessment both helped to create the conditions for the adoption of common instructional practices and benefited from the adoption by providing a common standard of measure across the school.

The Five-Week Assessments effect of redirecting teacher attention from an annual summative assessment to more routine school-wide assessments seemed to help align instruction with assessment throughout the school. Instead of a crash-preparation for the annual standardized test which would pre-empt ordinary instruction, the Five-Week Assessment program helped teachers and leaders to understand preparing for the standardized test as a year long process that would *become*, rather than *replace*, the instructional program. The Five-Week Assessment is a key instantiation of the desire to standardize instructional practices toward the achievement of school-wide goals. Such artifacts are not merely used to solve problems, they also come to constitute the problem-framing and solving

context for school leaders. Locally designed artifacts can change the context of implementation and sense-making, recreating the instructional world for leaders and teachers. This is an important way in which artifacts come to constitute their context of use (c.f. Giddens, 1979).The perceived demands the Five-Week Assessment program seem to legitimate the need for a redefined and expanded language arts committee, increased opportunities for leader modeling of instructional practices, and participation in test rallies to focus student attention. Thus the Five-Week Assessment is a seminal artifact at Adams, responding not only to the perception that formative data are important to improve summative performance, but also establishing expectations about the relation between assessment and instruction in the school.

An important aspect of the practical wisdom here lies in the ability of school leaders to see the problem of district-mandated assessment not only as an issue of compliance, but also as an opportunity to reshape the instructional program. In Section 3.3 we saw how the Breakfast Club became an opportunity to build professional community through the collaborative design, experimentation and review of instructional initiatives. We have just seen how the Five-Week Assessment became an opportunity to mold the school instructional program around the goals of standardized test score improvement. We will now turn attention toward a received artifact that aims to provide a measure of coherence to these and other instructional initiatives at Adams: the School Improvement Plan (SIP). While the Breakfast Club and the Five-Week Assessment demonstrate how the collaborative design of artifacts can be a powerful tool for school leadership, the SIP provides an example of how artifact re-design through implementation can reshape both the artifact and the context of use.

3.5 Site-Based Planning: the School Improvement Plan

The School Improvement Planning (SIP) process in Chicago Public Schools provides a window into the practical wisdom that guides the

implementation of a received artifact into an established context. In Chapter 1, I made the argument that not only the design of new artifacts, but also the implementation of received artifacts into an existing school allows leaders to set and solve problems in ways similar to the design of new artifacts. Unlike Breakfast Club or the Five-Week Assessment process, the School Improvement Plan (SIP) was established as a mandatory district-wide practice for all Chicago Public Schools in 1989 by the Illinois legislature. In many schools, such district-designed instructional planning processes can be mandated hoops through which school leaders must jump, completing forms for the sake of compliance and never consulted until the next round of submission is due.[7] When treated as external interventions, such mandated artifacts can glance off the instructional system of the school, leaving teaching and learning practices unaffected. However, externally-designed artifacts such as the SIP can be welcomed by savvy leaders as opportunities to both satisfy district requirements and to stimulate desired professional development opportunities in the school.

There is much practical wisdom in the ability to successfully negotiate the balance between compliance to external authorities and commitment to an instructional vision. Here I will describe how Adams' leaders use the district School Improvement Planning artifact as an occasion to spawn a pervasive, year-long local organizing process for shaping the school instructional program. The distinction between the SIP forms and policies as received by the district and the SIP process as practiced at Adams reveals how external artifacts can spark locally

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[7] One Chicago principal described how she and her husband would complete the SIP forms the night before they were to be submitted to the Local School Council. The council would approve the plan without review, it would then be submitted to the sub-district superintendent and shelved in the principal's office until the next spring. At no point were the faculty or staff consulted about

designed instructional processes. At Adams, the SIP both legitimates a method of instructional planning to the school community and serves as a symbolic touchstone for school instructional priorities. The SIP serves as the cornerstone for instructional leadership at Adams, and as the umbrella artifact for a professional community dedicated to instructional improvement. As Principal Williams stated "the SIP will continue to guide everything we do...we will continue talking about it because it is what has made us successful" (081999). In this section, Adams' experience with the adaptation of their SIP process will be used as a window into the planning practices of the school — showing how the goals, constraints and systemic interconnections with other practices and programs can be revealed through the adaptation of an existing artifact as well as by the design of new ones.

In particular, this section will highlight how leaders aim to provide program coherence (Newmann, et. al. 1999) to the Adams' instructional program. One of the original aims of the 1988 Chicago School Reform legislation was to establish mandatory school improvement planning in every school as a way to locally coordinate instructional and budgetary goals. The local control of the instructional program can, however, result in a proliferation of instructional initiatives. To the outside observer, this battery of programs can look like an impressive commitment to improvement, but to the local practitioner it can feel like an avalanche of demands, no one of which can be given its proper attention. This phenomenon of "Christmas tree" school (Bryk, Driscoll, et. al 1996) represents the down-side of local control as teachers and administrators each make commitment to favorite programs without a central organizing instructional mission for the school. Newmann et. al. (1999) developed the concept of *program coherence* as a way to measure the balance between commitments to instructional

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the process – the SIP existed entirely outside the day-to-day practice of the school and seemed to becompleted for compliance purposes only.

improvement via the adaptation of external programs, and a sense of how all these programs fit together. Program coherence has three main features:

    a. A common instructional framework guides curriculum, teaching, assessment and learning climate. This framework combines specific expectations for student learning with specific strategies and materials to guide teaching and assessment;

    b. Staff working conditions support implementation of the framework;

    c. The school allocates resources such as materials, time and staff assignments to advance the school's instructional framework and to avoid diffuse, scattered improvement efforts.

Clearly, program coherence is a key analytic concept for us to understand the world of schools and school leadership. Without conceptual tools to make sense of how the variety of instructional programs fit together, we cannot get a handle on how school leaders make sense of their practice. Still, noting that program coherence is an important concept is not the same as noting how coherence is created in practice. Here I will argue that Adams school leaders use the SIP process as a powerful tool to build program coherence. Through building a narrative of practice, I hope to show how Adams leaders set the problem of school improvement planning as a global process that addresses the key instructional goals of the school, and how, in turn, the instructional goals of the school are customized to satisfy the requirements of the SIP. This iteration between plan and program, between external and locally designed artifacts, shows the compounding effect of interrelated practices over time — the signature of the practical wisdom of school leadership. The sections that follow develop a narrative of practice centered on the Adams School Improvement Planning process. The DCAM that organizes the narrative is presented as Figure 9.

Figure 9   School Improvement Plan DCAM

Resources
- Tradition of collaborative curriculum planning and design around district-mandated assessment issues

- Breakfast Club as an accepted forum to discuss instructional issues; Five Week Assessment as accepted data source

- Tradition of in-house account-ability measures

Goals
- Coordinate instructional program with budgeting requirements

- Provide coherence for instructional program

- Show demonstrable student achievement gains

Problem-Setting
- SIP as occasion for development of professional community

- Integrate existing school initiatives into SIP

- Use program statement of SIP to restrict future initiative range

Strategies
- Use planning as a school-wide process

- Explicit coordination between instructional initiatives

- Tie planning practices to assessment and curriculum processes*

- Use planning as data-driven control mechanism to direct instruction

Problem-Solving
- SIP as umbrella planning process for school

- Tie all instructional budgets to SIP

- Use SIP to develop annual planning process

- Fold in existing grade-level and subject-matter structures into SIP process

Artifact
School Improvement Plan

Constraints
- District-mandated performance and planning standards

- Heavy concentration on Language Arts and Math instructional initiatives

- Accountability to Local School Council, District and state

- Explicit tying of budget to instructional initiatives

Affordances
- Established grade-level and subject-matter meeting structures

- Between .$.5 and 1 million discretionary spending allowance

- Local school administration structured to address instructional improvement

- Tradition of local instructional planning

3.5.1 What is the School Improvement Plan?

The story of the advent of mandatory school improvement planning is an essential aspect of recent reform efforts to restore local control to Chicago Public Schools. In an effort to build on the effective schools research (c.f. Purkey and Smith, 1983), reformers in the late 1980s attempted to reshape Chicago schools to feature strong principal leadership, local community control (via local school councils) over the budget and principal hiring, common district accountability systems and clear instructional priorities (Hess, 1996). A district-developed school improvement planning process was developed as an artifact to help school leaders coordinate budgetary and instructional priorities with the local school councils (LSCs) and the central office. Initially, school improvement plans addressed multiple instructional and community goals, ranging from improved attendance to enhancing foreign language programs (State of Illinois Report, 1991) Over time, however, the SIP process began to focus on the accountability measures mandated by the district. By the mid-1990s, legislators judged that the effects of the 1989 localizing control had not resulted in satisfactory increases in student performance scores across the district. 1995 school reform legislation claimed that local control had to be tempered by stronger accountability systems, and imposed punitive measures on schools that did not achieve significant increases (*Catalyst*, 1995). Once prominent SIP goals such as foreign language, arts and science education began to shake out as schools' instructional and budgetary priorities began to focus on gains in math and language arts.

This narrowing of focus is reflected in the Adams' SIP process. Since 1996, Adams' SIPs have focused on annual 3% increases in students achievement in math and in language arts, and an additional commitment to improving community relations. However, district accountability measures were not the only forces acting to refine SIP goals at Adams. Principal Williams contends that restricting the instructional focus is an important aspect of planning at Adams.

This restriction begins with the choice of external partners, and extends throughout the program. Williams notes that:

> We choose our (external) partners based on our priorities. We ask whether the programs coming in will help us to achieve our instructional goals. We will turn down set-programs that take us away from where we want to go. (121599).

The instructional focus that guides this sense of mission is not simply posited at Adams, rather, as I hope to show, it emerged from the experience of a variety of collaborative design projects that converge in the school improvement planning process. Thus we can begin to see that not only external district accountability measures, but also internal instructional mission pressures serve to restrict the instructional focus, moving Adams away from a Christmas tree model and toward a sense of program coherence

3.5.2 The SIP Artifact Itself

The School Improvement Plan as received by Chicago Public Schools is designed to offer schools an artifact to coordinate instructional vision, goals and resources toward improved student learning. The SIP form itself reflects district priorities about the nature of the planning process. Here I will present a brief analysis of the completed 1999-2000 form submitted for approval to the Adams Local School Council in Spring 1999. The artifact contains the following sections:

1. The **Executive Summary** (Appendix 2) provides a one page overview of the plan, including the *Vision-Mission-Philosophy* highlights, the *Priority Goals*, and the *Budget Allocation*. The Priority Goals must state percentage goals for student achievement in math and language arts as well as increased parent community involvement. Only Budget Allocations that support the Priority Goals can be included.

2. The **Cover Page** (Appendix 3) serves as plan legitimation document and a table of contents. The following additional sources of revenue and/or accountability must be attached to the plan to document school achievement

    a. State Chapter 1 Plan

    b. IASA Chapter 1 Plan

    c. Safe and Drug Free Plan

    d. Eisenhower Plan

    e. Block Grant (Senate 730) Plan

    f. Lump Sum Budget

In addition, there is room for acknowledgement for all the individuals who contributed to the plan. Adams' 1999-2000 plan acknowledges the contribution of sixty faculty and staff members. Finally, the Cover Page provides a tally sheet for the LSC approval vote, and the signatures of the Principal, the LSC Chair, and the Probation Manager (if necessary). Adams 1999-2000 plan was approved with seven yes votes, zero no votes, three absent members, and one board vacancy.

3. **Section 1 — Vision and Accomplishments** (Appendix 4).

The goal of Section 1 is to provide a sense of what the school has done and where it would like to go. The Adams school *vision-mission-philosophy* has apparently been refined over the years to reflect the staff and school instructional priorities:

> The Adams School community is dedicated to providing a comprehensive educational program for our students focusing on the developmental needs of the whole child. This will be accomplished through quality educational experiences, professional development opportunities, fostering a sense of community whereby parents are involved and committed to participating in their children's education, and providing a caring environment to nurture our students. In addition, students will be

provided with structured learning experiences that will enable them to develop into responsible citizens (Adams SIP, 1999).

The link between quality education and fostering a wider community of learners is mediated by professional development. As we have seen in the Breakfast Club, the professional development of teachers is seen as an essential aspect of the educational experience at Adams, and is reflected in the mission statement. Adams' *accomplishments* include recognition by the district as a "Level A school' based on continuous, outstanding progress on the ITBS in reading and math." Accountability measures dominate the list of accomplishments – the first paragraph recaps recent language arts and math achievements on the ITBS and IGAP. The other noteworthy accomplishments highlight curricular and professional development programs in the school – including the Four Blocks literacy program, Breakfast Club, Teacher Talk and Teacher Leader, Chicago Systemic Initiative[8] — as well as partnerships with local universities and service organizations.[9] The second page of Section 1 includes a school-community description, and a section highlighting test score strengths, weaknesses and trends. The conclusion drawn for Adams highlights recent improvements in math and writing achievement, but concludes that "overall reading scores on the IGAP remain unchanged."

4. In **Section 2, the Analysis of Current Conditions**, (Appendix 5) the SIP offers school leaders an organizational tool to analyze current initiatives. There are separate sheets provided for the following eleven areas:
   - Reading/Language Arts

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[8] Chicago Systemic Initiative was a five-year (1995-2000) district program designed to provide professional development and curriculum design opportunities to help schools improve math and science education. Adams participated in the program from the beginning of the initiative.

[9] It is interesting to note that while the *vision and philosophy* emphasizes a commitment to the education of the "whole child," the *school accomplishments* section focuses mainly on test score

- Math

- Social Studies

- Science

- Physical Education

- Computer Technology

- Fine Arts

- Parent and Community Involvement

- Professional Development and Collaboration

- Student-centered Learning Environment

- School Leadership

Despite the variety of domains offered for evaluation, the *priority goals* and *budget allocations* from the Executive Summary only address the first two goals; and the subsequent *Work Plan* offered in Section 3 addresses only language arts, math and community relations. The focus on language arts and math emphasized in the 1995 accountability reforms is thus *read into* the implementation process — the SIP artifact is interpreted by the school more narrowly than it is actually designed. The district emphasis on language arts and math, taken together with the lack of improvement on reading scores, helps to explain why there are six pages of analysis in the 1999-2000 Adams SIP for language arts, three pages for math, and less than a page for each of the remaining subject areas.

Each subject area sheet contains three columns: *Focus of Analysis*, *What is Working*, and *What Needs Work*. The 1999-2000 Adams SIP contains lists of items for each column in each worksheet, some describing successful or proposed programs, others describing effective or desired

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gains, professional development opportunities, and external school partnerships – leaving the connection between education, assessment, and professional development unspecified.

actions. For example, the *What Needs Work* section of Reading/Language Arts includes items such as: *Multi-level books for guided reading, Question-asking techniques for teachers and students,* and *Providing a list of sight-words for kindergarten*. This laundry-list approach to instructional program evaluation may be a good platform for initial brainstorming sessions, but makes it unclear how school leaders can either perceive or establish instructional program coherence as a result of the planning process.

5. **Section 3 — Goals, Work Plans, Monitoring and Budget** (Appendix 6) provides a plan for how the school will marshal resources to attain the school priority goals. The form contains columns for: *Work Plan Actions; Implementation Dates; Monitoring Activities; Target Dates; Budget/Fund;* and *Intended Use*. The event-driven structure of the form makes it difficult for the school to identify and apply funding for personnel instead of programs. For example, the salaries for Language Arts Coordinator and Program Assistant ($87,000) are included under the Work Plan goal of "Continuation of Five-Week Assessments in reading and writing." Manipulating the event-driven work plan to meet the needs of school leadership, to provide room for the people to exercise *phronesis* as needed in response to emergent problems, requires leaders to adapt the received form to a new intended use. The number of program and the budgetary allocations suggested for Adams to reach its Priority Goals seems to reflect the commitment of the school community to achieve gains in student reading scores. Of the $1.46 million in discretionary resources available to Adams leaders in 1999 and 2000, over 75% are dedicated toward improving language arts scores (Table 5).

The SIP artifact provided by the district thus seeks to marry instructional vision and goals to the discretionary financial resources of the school. The required LSC approval of the SIP is intended to make the school plan official by consideration of an elected board. Like any other implemented artifact, however, the SIP is subject to contextual constraints that push implementation in a given

Table 5

Summary of Adams 1999-2000 and 2000-2001 SIP Section 3 Budget

	1999-2000 Number of Initiatives	1999-2000 % of Allocated Resources	2000-2001 Number of Initiatives	2000-2001 % of Allocated Resources
Language Arts	26	77%	18	78%
Math	15	12%	9	6%
Community Relations	8	10%	8	16%

direction. The 1999-2000 Adams' SIP, for example, shows how the school understood the enhanced accountability measures of the 1995 reform legislation to restrict the priority goals of the SIP to increases in student performance on standardized tests. Concerns within Adams to revise prior efforts to increase standardized reading scores also contribute to an SIP work plan that proposes over 75% of the discretionary spending to be targeted toward language arts instruction. The adaptation of the SIP artifact is thus influenced by the local and district contexts of use.

Still, the analysis of practice of school planning can not end with the artifact itself. As we have seen above, pressing artifacts within the community of use can disclose aspects of the problem-setting and –solving practices of the school community. The adaptation of the SIP to the community, for example, discloses a

story of the historical importance of instructional planning at Adams, and leads to an account of how the SIP provided an opportunity for school leaders to construct a year-long planning process that became the hub of efforts to improve instruction across the school. As we will see in the next sections, as the SIP became an aspect of the everyday practice of instructional improvement, it also became a key vehicle for establishing program coherence at Adams.

3.5.3 SIP Problem-setting

Understanding how a problem is set gives us insight into how a practice makes sense to practitioners. Because school improvement planning is such an integral aspect of the practice of Adams school leadership, accessing the problem-setting requires us to consider the historical development of the planning process. The practice of school improvement planning is intertwined with many of the leadership practices at Adams, reaching back to the arrival of Principal Williams at Adams in the late 1980s. She reports that instructional planning was one of her initial tasks at Adams:

> (W)e began school improvement immediately, I believe it was 1988 when the first legislation passed that created school improvement plan, and we started from the beginning having everybody who wanted to be involved, involved (032299).

Instructional planning was a priority for Williams as the district-mandates SIP came into effect. Instructional planning, for Williams, was a way to get faculty and staff involved in conversations around instruction. The *phronesis* of school improvement planning at Adams is the insight that school leaders see it as an on-going problem rather than as an isolated task to be completed and shelved. Thus the main *goal* for problem-setting about school improvement planning at Adams is to use the district mandated SIP as an opportunity to get faculty and staff to work together. They saw the SIP as an opportunity for on-going collaborative instructional design.

Several of the key themes that guided school improvement planning at Adams emerged as implications of the use of external artifacts as occasions for collaborative design. First, *much of the activity of instructional leadership is engaging school personnel in collaborative design activities*. The apperception of school improvement planning as an opportunity for collaborative design reaches back to the beginning of Williams' work at Adams. As we have seen in the Breakfast Club problem-setting (3.4.1) Williams sought opportunities to bring faculty together for curriculum design opportunities from the beginning of her tenure at Adams. From the Bridging-the-Gap program designed to bring together the faculty of the two buildings at Adams, to the development of Breakfast Club, to the implementation of the SIP, Adams school leaders seemed guided by the conviction that leadership is about the collaborative design of solutions to school problems.

Second, *instructional planning should aim at the coordination and standardization of the instruction*. Research claims that a key to program coherence is the coordination of curriculum within and between grade levels. Williams relates how her initial efforts at instructional leadership at Adams were to coordinate teaching within the grade levels, then to coordinate curriculum between the grade levels (032299) After focusing on what teachers were already doing, Williams, Richards and Tracy and several teachers began to investigate curricular programs that would establish a common touchstone for instruction. This search resulted in, among others, a revised Middle school program for grades 6-8, and the Four Blocks program for language arts throughout the school. Contributing to the selection of which instructional program the school would adopt was a key feature of the SIP process. Tracy relates how discussions about priorities and resources were linked to the SIP meetings:

> (e)verything is tied into in the SIP somehow, that what gives it credibility
> in the school. The budget, and the initiatives are all tied in, if you want to

participate, you have to come early and stay late (at these meetings).
Early on, when the SIP meetings were poorly attended, people would
complain about not having the resources to get good work done, and the
administrators would reply that the teachers needed to come to the
meetings to plan for the things they wanted (032200).

The SIP process at Adams helps school leaders link standardization of the
instructional program with the need to curricular ownership by teachers and staff.
The SIP provides an excuse to consider the problems and the opportunities of the
instructional program, and to collaboratively design and experiment with solutions.

Finally, *the planning process needs to be informed and adjusted by
relevant assessment data*. Without a corrective from outside the school
community, instructional planning can turn into a form of self-affirmation as
faculty and staff shape a program around their own experience, instead of one that
works. Williams bristles against the complacency inherent in this form of school
community:

We set the expectation that our school will make progress, and we try to
provide the structure, the professional development, the monitoring of
instructional program, so that we can reach our goals. We expect to meet
our goals, and we set goals that we expect to meet, and excellence has
been the standard. We don't accept mediocrity. As an instructional leader
here, I would not be comfortable, I would not be satisfied, if our school
did not make continual progress. If we don't make the progress we
expect to make over a given time, then we are looking at answers and at
issue that would probably help us to improve. So we don't just sit back
with the status quo and say that's ok, the staff is happy, the kids are
happy. Well I'm not happy, because we are not making progress
(121599).

When asked about how these goals are measured, Williams responded through "measures of academic achievement," that is, the district-mandated standardized tests (121599). We have already seen how the Five-Week Assessment is used to provide formative data to guide the instructional program. An important activity of school leadership, again guided by the SIP, is to determine the schedule for assessment, to analyze the data, and to determine an appropriate course of action for subsequent planning based on student achievement data. We will see more about how this process unfolds in the consideration of the SIP problem-solving process.

The SIP problem-setting process at Adams began with the implementation of a district-mandated artifact. The artifact as received, however, is transformed in the implementation, to serve as a legitimizing occasion for on-going collaborative instructional program design in the school. The mandated SIP process may have initially encouraged teachers and staff to see the planning process as compulsory. Later on, however, it began to appear in the interests of teachers who wanted some control over the instructional program to participate in the SIP. The current SIP, after a dozen iterations, serves as a hub for the collaborative design, implementation, evaluation of the instructional program. Understanding how the problem-solving practice works is a key to understanding the *phronesis* of school leadership at Adams.

3.5.4 SIP Problem-solving

Current use of the SIP at Adams represents a form of problem-solving routinized, through over a dozen iterations, into an on-going practice. Routinized problem-solving processes can seem less problematic over time and more as tasks to be completed without consistent readjustment to emergent issues. Analysis of the 1999-2000 SIP process at Adams reveals a readjustment of the plan as the school community implements that language arts-heavy initial plan and begins to consider the challenges offered to the math program by new assessments. Tracing

through the stages of the 1999-2000 SIP process will provide some insight into how the practice fits together at Adams. Here I will highlight several key stages of the annual Adams SIP problem-solving routine: 1) pre-service; 2) fall program implementation, and 3) spring program review and redesign.

3.5.5.1 SIP Problem-Solving Process: Pre-service 1999

The pre-service school meetings are used by Principal Williams to set the tone for the upcoming school year. The SIP serves as a framework for her efforts to establish the instructional goals for the upcoming year to the assembled faculty and staff. Williams weaves together the school instructional program currently in play at Adams by using the SIP as a central sense-making artifact. Referring back to a collaboratively designed common ground from the previous year helps teachers connect current with past instructional priorities, and gives newcomers a sense of how the instructional program hangs together at Adams. While this could be considered as an example of espoused practice, these sense-making opportunities are key activities for organizational leaders to establish a common reference point for organizational sense –making (c.f. Gardner 1996).

Williams opened the meeting (081999) with a review of the 1998-1999 SIP reporting that the school reading scores went up 5%, and the math scores went up 7%. The announcement of each number receives applause from the faculty and staff. She then reviewed this year's key district instructional initiatives after noting that the administrative team recently met with CPS district officials at an all-day administrative in-service. This served as notice of Williams' role as an information relay between the school and the district – keeping staff abreast of latest initiatives and explaining how Adams currently stands in compliance. Williams' emphasizes the district's call for increased accountability for student performance by assuring the staff that Adams is already a Level A school and is "way ahead of the game when it comes to accountability." She commented that

the main accountability problem facing Adams is that, because of the high student mobility rate, "we have to worry about (the children) other schools are sending us" that test below Adams' standards.

Williams then launched into the 1999-2000 Adams SIP plan. The SIP is focused on two measurable performance gains, to improve language arts and math test scores by 3%,

Williams stated that "the SIP will continue to guide everything we do...we will continue talking about this because it is what has made us successful." Reading continues to be the high priority instructional issue.

> If we accept mediocrity, that is what we are going to get – let's begin the school year demanding excellence...if your students know that you have high expectations, they aren't going to turn in anything less...start your students out on the right foot right away and you'll be surprised at what they can do.

Williams reminded the assembled of the district's commitment to the Read and Write Well initiative that shows "we are not alone...that there is a system-wide emphasis on reading instruction." At Adams, the reading initiative takes the form of the Four Blocks program, which Williams insists "has to be implemented on a daily basis to strengthen student ability to understand what they are reading." Several overheads reviewed the Four Blocks program and focused on the use of graphic organizers as templates for critical thinking. According to Williams, graphic organizers help to "move instruction from a literal level to higher levels." She then explained how the Five-Week Assessment program helped to inform the SIP process, but noted that assessment doesn't stop there – "you (teachers) need to supplement it with measures of your own."

Williams continued with her review of the Language Arts goal of the SIP by commenting that " while we have done well in writing over the years...in guiding

students through the reading and writing process, we need the primary classrooms to continue their emphasis on phonemic awareness." She used an overhead to make the point that "without direct instructional support, phonemic awareness eludes 25% on in-class 1st graders...imagine the effects it had for our children" and made a reference to the prior year's professional development discussions:

> As we learned through several Breakfast Club discussions last year, the literature is clear – we can't superficially teach the basics; we must be clear that all students have a firm background.

Not all of the test score problems in reading are a result of students transferring in, however, as Williams described that "last year there were two 8th graders who somehow slipped through the cracks and couldn't read. They had never been referred" (A shamed hush fell among the faculty and staff, as if a great failure had been revealed). Williams paused, then continued "if we are still seeing red flags with our own students, we need to strengthen, to tighten and refine what we do."[10] To underline the importance of everyday reading and writing, Williams claimed that "the ISAT Math test now has a reading and writing component."

The next agenda item was participation in professional development programs. At Adams, Williams noted, professional development is not a one-shot deal — it is the critical part of the school improvement process. "We have to offer the best quality program for our students, and we learn best from one another...our greatest strength comes from the people in this room." Williams contrasted the Adams in-house professional development model with

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[10] As we have seen with the problem-setting of the SIP, a recurrent theme at Adams is to monitor and standardize the approach to emergent problems – here the response to the "slipping through the cracks" problem is to "refine our procedures", to increasingly rationalize the process of the identification and treatment of students with deficient skills, and to include this increased rationalization in the overall literacy planning process.

having other people who don't know what they are talking about come in...we have moved to a different level here. Our professional development focuses on helping teachers teach…. we are interested in using professional development to address emergent problems...we don't want to go to May and wonder what happened – we should know what is going on all the while with our children.

The Adams professional development program focuses on "dialogue across grade levels about programmatic issues that help students...we are not about tearing anyone apart." The first part of professional development is "professional", which means coming to meetings on time, and keeping regular attendance in the classroom. "This is a profession, not a job," and "kids won't learn if you're not here." School improvement and the in-house professional development program are tightly linked, indeed, professional development seems to be the engine of school improvement at Adams.

As compared to language arts, the review of the math program seemed to have less content and focus. Williams announced that she would oversee the math assessment program (from the recently promoted Assistant Principal and Math Coordinator) and read through the principles of "Mathematics Power," a 12-point program designed to focus math instruction in the school. (It was not clear whether the program was an external artifact or developed in-house). Williams emphasized that the twin principles of math instruction at Adams are "learning is fun" and "the instruction must really engage the kids." The math presentation quickly turned toward resource issues. She commented about how the calculators tended to "walk away" from the classrooms while teachers complained of a lack of resources. "We order most everything you ask for", Williams claimed, and asked teachers to "please turn back in (whatever is in your classrooms this summer) that you didn't order – even if you like it and wish you did order it!"

After the initial instructional program review, Williams reviewed policies on attendance, discipline, and teacher conduct. The main point of the talk seemed to be her willingness to adopt the role of instructional leader for the school. Placing the instructional priorities of math and language arts at the center of the in-service gave a clear message that this school is about improvements in student performance, and that Williams sees herself as the instructional leader. Reference to the SIP also brings instructional planning and implementation to the fore as important tasks of instructional leadership — instead of a constraint for the school community, Williams gives the message that the SIP guides "everything we do" and that teachers ought to take the process seriously. The disproportionate attention to language arts reflects the on-going commitment to improving the stubborn achievement scores in reading, while the cursory review of the math program may indicate that Williams feels that the math program is well in hand. Williams narrative style weaves together the themes of "we are already a good school" with a reminder that "we can do better;" her familiar, off hand reference to the Five-Week Assessment and Breakfast Club legitimate these programs for the community and indicate the administrative priorities for newcomers. Although the story Williams tells goes beyond the SIP, the SIP is the central artifact she uses to tell the story, and thus elevates the SIP as a central sense-making tool for the school community.

3.5.5.2 SIP Problem-Solving Process: Fall-Winter 1999

The next stage in the SIP process is the implementation and sharing of instructional program priorities. This process was largely conducted during faculty gatherings, but also formed a part of the annual teacher observation cycle. During fall and winter of 1999, several of the faculty gatherings, such as Breakfast Club, Teacher Leader, and Teacher Talk, are dedicated toward understanding and reflecting on the practices described in the SIP. For example, Assistant Principal

Richards opened an October Teacher Talk meeting with a comment resulting from the recent Five-Week Assessment in language arts: "we are off to a good start this year, but we have a puzzling problem. While disciplinary problems are down this year and the students are behaving better, their academic performance is not as good" (100199). A lively discussion ensued during which teachers commented about student preparation from the previous year, techniques for helping students critique each others' writing, and motivational techniques for disinterested students. During a Breakfast Club meeting (101899), a first grade teacher led a discussion about multiple approaches to reading instruction around a pamphlet provided by the International Reading Association. Much of the discussion revolved around how the Four Blocks program addressed the literacy needs of students, but that the program could not be implemented blindly – it must be creatively employed by teachers. Another Teacher Leader meeting focused on how manipulative in math instruction would lead to improved student performance on the ITBS (110399).The Five-Week Assessment also played a big role in helping grade level teachers determine the progress their students were making toward testing gains. Section 3.5.1 (above) describes how the African-American Heritage Teacher used the Five-Week Assessment results to bolster preparation for the upcoming 5th grade ISAT science assessment. A second grade faculty meeting convened by Williams (102099) shows how the Five-Week Assessment is used to motivate teachers to stay on the instructional course by consistently implementing the Four Blocks program. Finally, the program described in the SIP is used to inform the administrations teacher observation cycle. School initiatives in the use of manipulatives are used as by Williams as a basis of evaluation in one second grade math class (112399).On the same occasion, Williams explains how a personalized professional development program in the Four Blocks was used as a remediation technique for a veteran teacher who was either unwilling or uninterested in implementing the program. The teacher was given a professional

day to participate in a workshop designed by Williams, Tracy and Richards on how the Four Blocks would fit into her instructional day, and encouraged in no uncertain terms to implement the program in her daily practice or face punitive measures (112399).

3.5.5.3 SIP Design Process: Spring 2000

The majority of the explicit SIP redesign and evaluation process came in the spring of 2000. Here I will discuss two key elements of that process: the SIP redesign faculty meetings in language arts and math, and a leader discussion to evaluate the 2000 ISAT test results. In February of each year, meetings are held by each of the subject matter committees (c.f. 3.5.3) to determine the key SIP revisions and suggestions. School leaders then organize large group subject-matter faculty meetings in language arts and in math during March 2000.

3.5.5.3.1 Language Arts SIP meeting

Language Arts Coordinator Tracy took the lead in coordinating and conducting the Language Arts SIP meeting (031700).The five teachers on the language arts committee and Tracy led a brainstorming session as 24 (of 48) faculty members contributed their ideas about what worked and what needed to be done for the next year. As a group, the teachers discussed how the Four Blocks worked in classrooms during the year. There seemed to be consensus that the Five-Week Assessments in reading were providing good information about student performance, and approved the program to provide substitutes when teachers engage in professional development and curriculum design. Middle school teachers commended the literature circles at grades 6-8 intended to replace basal readers with reading and group discussion of literature. Teachers and leaders alike recommended continuing Teacher Leader, Breakfast Club and Teacher Talk, and

suggested that the school support professional conferences for Four Blocks training for all teachers.

Under the category of "What needs work", Tracy suggested that assessments in writing need to be extended beyond ISAT testing period using creative writing, book reports, writing contests. Several members of the language arts committee proposed that teachers will grade their own papers for the writing aspects of the Five-Week Assessment and discuss school-wide results and student intervention needs at monthly 1/2 day grade level meetings. One teacher suggested that the Four Blocks program be supplemented with the kinds of subject-specific periodicals used on the reading comprehension parts of the ISAT. Tracy ended the meeting with an offer to summarize the results of the discussion for approval at the upcoming Math SIP meeting.

3.5.5.3.2 Math SIP meeting

Tracy took the lead in the Math SIP meeting (032200) with an offer for teachers to review and approve the results of the language arts SIP. 21 of the 48 Adams teachers attended the voluntary math planning meeting. After about ten minutes of discussion, Tracy sat down as the 1999-2000 Math SIP was distributed. Teachers began looking to Tracy to conduct the discussion, but she remained seated as if waiting for one of several of the teachers to take the lead. After about 5 minutes of buzzing conversation, a first-grade teacher began a discussion of the adequacy of the current HBJ textbook series. Tracy later explained that:

> The teachers have to own the meeting process because the SIP depends
> upon their commitment to the changes we propose…if the teachers don't
> take charge, the meetings don't work….There were a couple of times
> during the meeting today where (First Grade Teacher Mrs.) Brown looked
> over at me (for some help at getting the meeting going) …(032200).

Tracy continued that "people need to stand up for themselves at the meetings, I can't stand for them." She related that after many of the early SIP meetings, people would come up to her and let her know programs or resources they wanted but didn't bring up at the meeting. (032200) On another occasion, Tracy's comment about gradual increases in participation paralleled the invitation to participate seen earlier in Breakfast Club attendance:

> At first, the teachers didn't see it this way, then they realized that all of the resources are passed out through the SIP – if they weren't involved in the process, they didn't get any of the resources (041400).

To encourage their participation, Tracy would say how they needed to step up and speak their minds at the meetings (032200). Tracy's comment is interesting considering the level of her involvement she considered appropriate in conducting the Language Arts meeting. As seen above in Principal Williams comments about the math and reading SIP goals, the subject-matter differences between language arts and math were played out here in leadership practice (c.f. Spillane and Burch, 2001)

As the math discussion unfolded, the five members of the Math Committee (teachers from grades 1, 3, 5, 6 & 8) acted to coordinate the brainstorming session. First Grade teacher Brown took notes and appeared to take on Tracy's language arts discussion coordinator role for the math meeting. One Math committee member noted that "We need to work on the more open-ended, problem-solving aspect of math" (032299) in anticipation of the new accountability challenges proposed by the ISAT. An eighth grade Math Committee member added that "next years' (text)book has a lot of practice with open-ended questions…the middle school lessons will have an open-ended question every day…consistent with the NCTM[11] standards." Teacher perceptions seemed to be that the ITBS

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[11] National Council of Teachers of Mathematics

focused on skills testing while the ISAT would focus more on problem-setting and –solving issues. The math committee recognized that the current instructional program was well tailored to the math problems of the ITBS, but not as well suited to the ISAT. (As we will see below in Section 3.5.5.3.3, Math committee member apprehensions were well-founded, as students performed at a much lower level compared to national norms on the ISAT as compared to the ITBS).

Several other themes emerged in the math SIP discussion. Previous SIPs focused on the use of manipulatives as a key to improving student performance in math. One committee member noted that "some teachers are not using manipulatives the way they should. We need team teaching to help teachers learn to use manipulatives well." Several members of the math committee offered their services as classroom support teachers to help with the proper use of manipulatives in the classroom: "look to your grade level, and to the Math committee, to help you out (with manipulatives)" Another teacher commented that the Five-Week Assessment program in math be expanded to provide the information generated by the language arts assessments: "I think we should make the assessments similar to how they are planned for Language Arts, I would like to see us plan for the testing in math the same way." Tracy's role as language arts Five-Week Assessment coordinator had no analogue for math — the math exams were developed and conducted by full-time teachers and apparently had not received the same attention as the language arts exams. This is especially felt by teachers facing the new challenges of the ISAT. As one teacher commented: "when you look at last years ISATs, (you can see) what we are doing now (for the 5 week assessments) is not working."

The power of the discussions in these collaborative SIP design meetings emerged in a contrast between emphasizing problem-solving skills and open-ended questions in math. Several teachers claimed to not understand the difference between the two, and thus did not appreciate the change in emphasis from the

ITBS to the ISAT exams. One Math committee member reported that "problem-solving and open-ended questions are the same thing;" while another added "when I think of problem-solving, I think of story problems." The first grade math committee member responded that "problem-solving isn't always open-ended," and the fifth grade committee member added that, for the purpose of standardized tests, "they did the same thing with multiple choice, and called it problem-solving." As we will see in the next section, the confusion between problem-solving and what I have called problem-setting represents a real challenge for the Adams math program — a challenge that comes out in the school ISAT math scores and represents a considerable future obstacle as the math instructional program struggles to adjust to new assessment instruments. The math meeting was adjourned with an offer of first grade teacher Brown to assemble and submit meeting notes to Tracy.

These SIP review and design meetings provide a glimpse into the collaborative design practices at Adams. The meetings are held to provide interested faculty members with an opportunity to shape the school instructional program. By and large, the problem-setting process has been completed by the time the meetings are held — the goal of the instructional design process is set at 3% improvement in language arts and math achievement on the ITBS assessment. The design meetings also rely upon considerable resources in developing problem-solutions. Prior experiences with the Five-Week Assessment program, Breakfast Club and collaborative program design meant that teachers and administrators could focus on program refinement rather than novel redesign; experience with group collaboration practices meant that much of the process could be simply assumed so that participants could focus on problems rather than process. Tracy commented on the advantages of working with a mature SIP process:

> We have done this so often that we don't need to talk about it – we just
> pass it on until it is done… over time, the teachers know that they are

accountable for the goals described in the SIP, and they begin to realize

that they can shape the goals by participating in the meetings (041400).

Routinization of externally introduced instructional programs can sometimes lead to marginalization as the practice is deflected from the daily practice of the school. This can be seen when schools act to minimally comply with external directive, completing processes that end up having little influence on practice. The routinization described here, however, does not seem to marginalize the SIP process. Rather, the SIP process forms the hub of the instructional planning process, providing a forum for the discussion and approval of school-wide instructional initiatives.

This almost ceremonial function of the SIP is reflected in Tracy's comments about the role of the SIP in the planning process. At Adams, the SIP seems to serve as a summative process to make a public statement of the school instructional priorities – following up on conversations begun long before the formal SIP meetings. Tracy comments that:

most of the programs we bring up in the SIP are seeded discussions over lunch and at grade level meetings. For example, we talked about the Four Blocks program a full year before we introduced it into the SIP. (One first-grade) teacher who reads a lot presented the basic ideas of the Four Blocks at a Breakfast Club, and there were several Teacher Leader meetings about the Four Blocks program. I know that the program was discussed at grade level meetings, by the time we talked about putting it into the SIP, everyone was on-board. We mandate things after they are already accepted (041400).

The SIP artifact at Adams is thus used, at the same time, as a summary instrument to bring together pre-existing planning practices and as an occasion to legitimize school-wide instructional planning. It would be interesting to trace the development of the SIP from a catalytic (i.e. kicking school-wide planning into

action) to a summary practice (i.e. bringing together existing planning practices) in order to see the development of the practices over time. As I described in Section 2.1, the disadvantage of recounted collaborative design efforts is an inability to disentangle actual from recounted development – as if the actual preconditions for a program are compressed in the subsequent retelling of the story. In the case of the Adams' SIP, which represented a mature adaptation of an externally introduced artifact into a nascent culture of improvement planning, it is difficult to tell where the catalysis ended and the summary role begins. Comparative study of school improvement planning in other schools may offer more detail about the developmental interdependencies of artifacts and instructional planning.

3.5.5.4 Using Standardized Test Scores to Assess SIP Priorities

As we have seen, the advent of recent school reforms in Chicago have placed great pressures on schools to improve student achievement scores. As we have also seen, the Adams school community made early progress with math score improvement, and paid much attention (and resources) to improving stubborn reading scores. Because the SIP is geared toward improvement on a particular exam (ITBS), the construction and emphasis of the exam itself has significant impact on the program design. We have seen how the summative exams spark local collaborative design at the school – for example, the design of the Five-Week Assessment depends on the practice of reverse engineering the summative standardized exam. A true test of the flexibility of the SIP process is the ability to adapt to goal changes – to consider what happens when the exams change.

The Illinois Standards Achievement Test (ISAT) was introduced in 1999 as a means to measure student achievement in schools across the state. In the initial tests in Chicago, however, less than half as many students (20%) tested at national norms as math when compared to achievement on the ITBS. The achievement gap

seems to be caused by several key factors. First, the content of the ISAT differs considerable from the ITBS:

> The ISAT focuses almost solely on concepts and complex word problems. Such challenging material comprises only 30 percent of the ITBS, which is mainly computation and simple word problems (*Catalyst*, June 2000).

Another obstacle to achievement on the ISAT is that since the ITBS remains the probation accountability measure for Chicago schools, most preparation attention will be placed on the ITBS. A further key challenge is that the ISAT math relies much more heavily on reading and interpreting long text passages than the ITBS. As one researcher noted "Every kid who has a reading problem is going to have a math problem if you're dealing with word problems" (*Catalyst*, June 2000). Thus on the ISAT, the chronic problem many schools have with reading improvement begins to bleed over into math achievement. Finally, the ISAT relies on NCTM standards that encourage children to use math concepts to determine as well as to solve problems. Teachers accustomed to helping children learn procedures thus have to rethink their teaching practices by developing problem-setting as well as problem-solving skills for their students. This forms an acute professional development challenge for the many Chicago schools with few credentialed math teachers (*Catalyst*, September 1998).

Adams teachers and leaders began to see the discrepancies between student achievement on the ITBS and ISAT upon receiving the first ISAT results in summer 1999. This was reflected in several places thus far in our narratives: in the Five-Week Assessment reshaping to include the ISAT-type problems (section 3.5) and in teacher concerns (above, Math SIP meeting 3.5.5.3.2). I had the opportunity to observe the leadership team meeting that took place in Tracy's office as the 2000 ISAT test scores arrived. The following story gives some insight into the problem-setting practices as Adams' school leaders considered

what the test scores would mean for the school instructional program and community.

<p style="text-align:center">*   *   *   *</p>

On the afternoon of May 8, 2000, two boxes arrived at Tracy's office, containing the ISAT test score results from the January 2000 exams. Tracy called Principal Williams in the main building to come over to see the scores, and soon I was in the midst of an impromptu administrative team meeting. Tracy began to make copies of the results, and when she passed a copy to me, I felt an implicit invitation to stay as an observer of the process. The meeting appeared to fall into three distinct stages:

a. sorting through the data;

b. summing up preliminary conclusions, and

c. developing an action plan.

It was interesting to note how the roles emerged during the course of the meeting. Williams appeared to head the data analysis effort, making the first attempts to summarize the findings, and guiding the discussion on action steps. Tracy seemed to act as administrative assistant and as literacy expert, making copies of the data sheets for everyone, and delving into the literacy elements of the report. Assistant Principal Richards arrived with Williams and was quiet during most of the analysis process, commenting only several times on how the report was likely to make her staff feel, and expressing her approval and disappointment in the results. Ms. Greene, Ms. Taney and Ms. Grovenor, 2nd and 3rd grade teachers, appear to help Tracy make sense of the literacy scores, and Assistant Principal Andrews (Assistant Principal of the primary building) was largely quiet during the entire process.

3.5.5.4.1 Data Sorting

In the data sorting stage, Tracy begins to copy the summary findings sheets, Williams arrives and begins sorting through a packet of about a dozen ISAT data sheets, apparently looking for trends. She begins reading through the reading and math scores of the 3rd, 5th and 8th grades. As she reads through the sheets, Tracy begins to make copies. It is clear that Williams is the one who will take the initial cut at interpreting the numbers. Several 2nd and 3rd grade teachers (Grovenor, Greene and Taney) wander in to see what is going on. (Tracy passes one of the copies of the result summary sheets to me, indicating to me that I am welcome to stay for the meeting).

Table 6

Comparing results of Adams 1999-2000 to 1998-99 ISAT

Grade	Reading	Math	Writing
3	Down slightly	Down	Up
5	Down slightly	Down	Up
8	Up	Down significantly	Up

The score reports are broken into several categories.[12] Williams reads for the

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[12] The main categories include:
- Academic warning
- Below standards
- Meets standards
- Exceeds standards

These categories are further divided into columns entitled:
- All students
- Students with IEPs
- Students without IEPs

These categories are crossed with main categories "Reading", "Writing", and "Mathematics", with scores for the categories "Science" and "Social Science" empty.

columns "all students" who either "meet standards" or "exceeds standards" and adds the columns up to see how the Adams performance fares. About 3 minutes after reading the 3rd grade scores, she asks Tracy for the 1998-99 scores for comparison, and asks Tracy to call Richards to come over to review the scores. Tracy goes to her desk and retrieves a blue folder with copies of last year's score reports. Williams takes the folder and sets the new and old sheets side-by-side to make the comparisons with last year. Williams announces the content described in Table 5

The 8th grade math scores cause the most dismay – Williams states that the scores are "way down." Last year's data shows that 22% of Adams 8th graders either met or exceeded the ISAT standards; this year only 10% met or exceeded the standards.[13] On the other hand, nearly 75% of the students from across the three grade levels met or exceeded the writing standards, and over 50% across the grade levels met or exceeded the reading standards.

In the next section, I track parallel conversations to show the problem-setting process emerge in the face of the incoming data. The left-column represents a conversation between Williams and Richards about the shortcomings of preparing for the math section, while Tracy and Greene discuss the success of preparations for the language arts section of the ISAT (Table 7).

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[13] The main focus in the meeting emerged about where the scores fell short of expectations. There was good news in the results that went unreported – the main shortcoming of 8th grade math received the most attention. Even in areas where the data was inconclusive (5th grade reading & math) the leaders dissected the grade level teaching arrangements to determine where improvements might best be made. Further, no mention was made at all of whether conclusions could safely be drawn from a two-year ISAT data series. A variation from 22% to 11% achievement in a grade level might well be within an acceptable variation from year to year data on a new state-wide assessment, depending upon the content tested and the rubrics used.

Table 7
Parallel ISAT discussions

Time	Williams-Richards Conversation	Tracy-Teachers conversation
10:25	Richards arrives from the main building, and Williams announces that "we have some good news, and some bad news" and reads off the scores to Richards and the rest of the group again. Richards listens and shakes her head when the 8th grade math scores are read.	Assistant Principal Andrews comes into share in the news, but is largely unacknowledged by the group. The teachers, save Ms. Grovenor, begin to leave the room.
	Richards takes the sheaf of individual student scores from the eighth grade while Williams looks at the composite scores, apparently to find pattern in the data that will help to pinpoint the areas of concern in math.	Grovenor receives credit from Tracy as the key reason for increased writing scores from Tracy.

There is a sheaf of individual student scores provides by ISAT – Tracy begins to sort through the 3rd grade writing scores. The writing scores are graded according to a 6 point rubric – a perfect paper has a 6 point scores. A cover sheet notes that there are 4 perfect papers among the 3rd graders. |
	Richards looks over the scores, and says "I do not like this at all."	
	Williams comments that "they are falling in algebraic relationships…but also in measurement and in geometry." (it looks like the 8th grade math scores are the key)	Before the test was sent off in January, Tracy made copies of each student paper submitted. Grovenor gets and opens the file, and Tracy scans through the scores to find the students who received the perfect scores. The names of the perfect paper students seem to surprise Tracy and Grovenor – apparently these students are not expected to be at the top of the list.
	Richards begins to read off the deficient scores of the best students – nearly all of which score in the 30-40 % range. Richards shakes her head as she reads – and she discusses with Williams the merits of	
		Tracy comments "I'll bet it's the scoring",

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[14] Even with the poor math showing for this year, the composite score sheets for the 2000 ISAT, absent science and social studies, indicate that Adams has scored at about 55% across the board – and would be in safe territory under the current standards. However, there is talk that the ISAT standards should be raised to the 75% mark, in which case Adams would be in trouble.

	individual students.	indicating that there might be a discrepancy in the announced rubric and its application.

Tracy calls out the name of a student, and Grovenor finds her paper. They pore over the paper, and are unimpressed by the results – the paper reads like it was composed by formula, and shows "no creative flair."

They single out narrative and expository answers, and when I ask about the difference, Tracy explains that "narrative has always been harder (to teach?), expository writing follows our power writing formula." (This is one of several comments that attributes differences in student performance to teaching methods).

Tracy announces another student, this time an 8th grader, and Grovenor comments that it is a narrative paper. (Ms. Greene, who has entered the room, comments that "she was a good reader since the 8th grade")

Tracy says "I told you they wouldn't change the scoring rubric – they told us not to teach power-writing for narrative, but that's just what we have here." Tracy reads a list of characteristics of the power-writing teaching method, and they correspond to the parts of the student's paper. So it seems as though the student had been graded well for following the wrong procedure. This leads to a brief exchange about the application of the scoring rubrics.

Tracy comments that " they didn't read them carefully, they used the rubrics as a checklist." |
| | After some time, Williams comments "I'm stunned…even the strong students didn't do well. This is a hard lesson for us." I ask about the consequences for the school because of the poor scores on this version of the test, and Williams answers that "there are no consequences for this year, but next year if the school doesn't test about the 50% norm across the board the school will go on state probation."[14] | |

The Williams and Tracy conversations reveal several interesting characteristics about problem-setting. The Williams-Richards conversation seems

to take the ISAT exam as a legitimate measure of student achievement, but are perplexed about the drop in the eighth grade performance. Their familiarity and involvement with the instructional program is shown in their identification of the traditional top-scoring students in the eighth grade as a standard against which the program can be measured. Their reasoning seems to be that if the best students have also struggled on the exam, it must be a problem with the instructional program, rather than with the motivation of particular students. The Tracy conversation reveals this same familiarity with individual student performance tempered by disciplinary expertise. Tracy and Grovenor use their language arts resources and program knowledge to pinpoint how the test was scored to offer insight on patterns of student performance. Their access to individual student test papers to compare with anticipated performance leads them to question the legitimacy of the ISAT scoring rubric. This comparison has no analogue in the Williams-Richards discussion, where there are no independent resources present to assess whether the ISAT has successfully measured the target skills. The performance gap between math and language arts raises issues about subsequent SIP program priorities for the upcoming school year, and, together with the subject-matter expertise difference in the room, seems to suggest that Adams' leaders accept the math measures as legitimate while questioning the language arts results. In the next section on preliminary conclusions, we will see how leaders question the quality of the Adams math program rather than the quality of the assessment, while taking credit for a language arts program that seems to surpass the requirements of the ISAT.

3.5.5.4.2 Preliminary Conclusions

As the meeting winds down, the leadership team begins to draw conclusions from their initial sense-making efforts. Williams begins by throwing

out tentative summative comments about the teaching configuration and the test
score patterns at the grade levels:

- "The 5th grade is strong in writing with Ms. Ogden, and even though the
  math teacher broke her leg, we didn't do too badly in math."
- "The 8th grade is weak in algebraic reasoning…" Richards interrupts
  "Walthers (8th grade math) knows that and has asked for help in Algebra."
- "The 'making the grade' program[15] didn't hurt us much in 5th, the 3
  students coming in from Dawson (a feeder elementary school) didn't make
  much difference either"
- Williams comments that "word block (an aspect of the Four Blocks
  program) must be working in 3rd, writing is up to 70%"

Adams leaders seem to assume that the key variables in student performance are
the quality and capability of the teachers at the grade levels and the degree to
which the instructional program has been implemented. These are empowering
assumptions that allow framing of instructional problems as solvable and deflect
discussions away from unsolvable issues such as the capacity of the children.
When asked whether the 8th graders are just a particularly tough bunch this year,
Richards replied that "no, each grade level has their own special concerns, we
don't find that any particular group stands out." This interesting version of *ceteris
paribus* allows the school to compare student ability as invariant – and grade level
as the key comparator for the school.

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[15] Making the Grade is a CPS program where students held back coming into 4th grade re-do their
3rd grade studies and complete two rounds of summer school. Upon successful completion of the
program, the students, in effect, skip 4th grade and are promoted directly into 5th grade.
Administrators apparently felt that this would have a detrimental effect that was not clearly
reflected in the scores.

3.5.5.4.3 Tentative Action Plan

In the final stage of the meeting, as Adams school leaders appeared to get a handle on the patterns present in the ISAT data, the discussion began to turn toward the development of an action plan for staff and program redesign . In the 5th grade, Williams noted that:

> (W)e need to continue to introduce *National Geographic* materials in the reading program to beef up the science…it looks like in 5th the lowest area was vocabulary; the lowest area in math was measurement. We need to integrate more measurement into the science lessons…in 5th grade, Ogden is doing a good job in writing, and once Bronson gets back, we should do better in math."

Tracy responded "why don't we switch Ogden to reading – that's harder to teach than writing, and she can handle it." Williams did not comment directly, but remarked that "we need to firm up the 5th grade like we did with 3rd last year."[16]

The conversation then switched to the 8th grade math scores. While the leaders seemed to anticipate the problem in the 5th grade due to the unanticipated shake-up in 5th grade personnel, the significant (12% from 1999) decline in 8th grade math scores seemed to catch them by surprise. Williams began the action plan discussion with an assessment of the 8th grade performance across the board and a statement about the programs already in place to address the math issues. She commented that:

> 8th grade was strong in writing…and we have remedies in place for (8th grade) math that have just not kicked in yet. We are teaching a class

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[16] In 1999, several teachers were pulled from 2nd grade to firm up the 3rd grade program in anticipation of the strong accountability measures implemented in the 3rd grade (ITBS and ISAT) The odd problems in 5th grade (two teachers out with health problems, one permanent sub and Ms. Ogden were the only constants) apparently lead Williams to think about re-staffing to meet the accountability demands.

through Roosevelt for the middle school math teachers that has only just begun, and another class for math teachers across the school on algebra has not yet had its effect.

Richards again added that "(8th grade math teacher) Walthers has been asking for more algebra" which opened up a more general discussion about what to do about. Williams added that: "…they (the state) also changed the 8th grade rubric about a month before the test, so we did not get a chance to look at it (and change out instruction) in time."

The conversation then turned to how the teachers responsible for implementing the math instructional program did not seem to be pulling their weight. One leader noted that "the math teachers are asked to help other teachers improve their math instruction, but I'm not sure how much they talk with each other about instruction." Another administrator remarked that the math teachers seemed unwilling to share their knowledge with one another - that "(for them) it is all about ego – they (the math teachers) all think they are experts – that they have nothing to learn." Finally, a third administrator followed with an interesting point about how, in math, some teachers are

testing all the time, instead of teaching. Instead of working through difficult problems, teachers assign them for homework and leave the students to struggle with them. We need to look at homework to make sure that there is teaching as well as testing in the homework. Is looking at the 8th grade math, we need to look at the amount and the quality of homework assigned.

The last conversation forms an interesting contrast with the professional community around language arts, providing an interesting example of how improvements in student performance seems to be attributed to program success, while declines in test scores are attributed to individual teacher practices and attitudes. The discussion seems to reflect the Adams confidence in the strategy

that in-service and re-staffing effectively remediate instructional difficulties. The advanced development of the language arts instructional program reflects a significant investment in time, personnel and resources in the Adams instructional program. The math program, due in part to early test score successes in the mid-90s, has not received nearly the institutional support. The language arts program has an coordinator relieved of classroom responsibilities, three professional development programs (Breakfast Club, Teacher Leader, Teacher Talk) dedicated largely to language arts issues, and an extensive curriculum development program involving the whole faculty. The coordination of the math program, on the other hand, is shared by several full-time classroom teachers, relies upon professional development workshops conducted by external partners, and has a textbook-based curriculum program.

The move for Adams school leaders to blame motivation or ego-issues in personnel for the decline in math score seems to be a case of taking for granted that the resources invested in one area of the school program will have similar benefits in other areas. This may indicate that professional community in middle schools, like in high school, is distributed differently according to subject area (c.f. Stodolsky and Grossman, 1995) It may also suggest that the Adams leaders' attribution of lack of personal motivation in assessment efforts can often conflate resources shared in one area of the school program for benefits in another. It appears that the effects of Adams language arts programs are not recognized as achievements that have not taken place in math. The *nature* of the ISAT math test was noticeably absent from the discussion, as opposed to the critiques of grading rubrics in the language arts section. It was almost as if the math achievement scores existed independent of the math content, and the ISAT scores themselves (rather than the underlying content) the only things to legitimately consider in the process. At Adams, it seems that local conversations about literacy content knowledge and pedagogical practices, the result of the considerable investment in

literacy professional development, do not necessarily extend across disciplines. What looks like to school leaders like problems with "ego" or "homework policies" in math may well be lack of access to the kinds of professional community that have grown around literacy practices in the school.

This ISAT test score interpretation provides some evidence for how the SIP process avoids becoming a stagnant routine and remains a living, organizing process at Adams. Though this represents a single example of how leaders respond to summative data reports, discussions with school leaders indicate that this was a fairly typical data analysis session. Making sense of the summative data gives key feedback for the school improvement process, indicating to school leaders how well their initiatives are faring, and where subsequent efforts need to aim. As in the other artifacts discussed above, the main participants in the ISAT analysis were Williams and Tracy. Williams was clearly the executive, making the initial forays into the data interpretation, and making the initial summative statements. Her comments were mainly responded to by Tracy, while Richards made a several insightful comments about the results. Other participants were all but silent during the "problem-setting" phase of the meeting. The data interpretation phases of the discussion is an example of how behind-the-scenes leader meetings are vital for making sense of how student testing data will be used to inform the school improvement planning process at Adams. These meetings are usually closed sessions in which school leaders discuss the direction and effectiveness of the school instructional plan — outsiders are rarely welcome. The interpretation practices reveal how the effects of the existing network of designed artifacts act as sense-making tools for school leaders. The investment in the language arts professional community, for example, gives school leaders considerable resources for the diagnosis of relevant testing data. The fact that Adams performed relatively well on the reading and writing sections of the ISAT was taken as a consequence of program design.

The ISAT discussion also reinforced the subject-matter distinctions that we have seen throughout the artifact-analysis section. Time and again we have seen how the subject-matter differences between math and language arts both stem from and contribute to the establishment of different networks of expertise in the school. The investment in language arts program development, and the identification of the language arts program with assessment efforts, seems to have resulted in an insider-outsider culture in which language arts expertise is located in the insider team, and math expertise is located outside the administrative team in teachers and external consultants.

As we have seen, the redesign and implementation of the SIP at Adams is used by school leaders as an important artifact to bring coherence to the instructional program. Rather than an artifact complete because of compliance, the Adams SIP is used as a public statement of instructional priorities and as an occasion to coordinate the school instructional program. While the artifact itself can be completed and ignored, we have seen in Section 3.5.2 how, in the hands of Adams school leaders, it is used to keep track of on-going instructional and budgeting priorities. In the pre-service 2000 talk, Principal Williams relies heavily on the SIP as the public statement of the instructional program, speaking of the school instructional initiatives as if they respond directly to SIP goals. The planning and redesign meetings of 3.5.5 show how the SIP provides the occasion for a annual discussion of subject-matter based instructional planning as teachers and leaders review and consider initiatives for the upcoming year. And the ISAT discussion of 3.5.5.4 shows how the analysis of testing data takes place under the framework established by the SIP, as school leaders discuss test score implications in terms of the math and language arts programs outlined in the SIP. By prominently featuring it as an organizing artifact, and in using it as a sense-making tool, Adams leaders use of the SIP provides a central tool for building instructional program coherence in the school.

While anchoring narratives to the legitimacy of locally-designed artifacts can open a window into the problem-setting and solving processes of leadership practice, this is merely an initial foray into a larger research project to access, document, represent and test narratives of practice. Because narratives of practice are constructed *post facto*, they can fall victim to a kind of idealized sense-making that makes practice look more clean in retrospect than it was in prospect. This makes the research work of developing rigorous methods to understand and implement appropriate standards of representational validity a key aspect of the research program. In other work, we are engaged in investigating the nature of verification and representational validity of practice narratives through constructing and testing multimedia case-representations for correspondence and for verisimilitude. (Halverson and Gomez, in preparation). Chapter 4 describes our initial foray into our efforts to construct a multimedia narrative, based on the Breakfast Club case, to provide an opportunity for reflection to the members of the Adams school community and to begin our efforts to communicate the practical wisdom of Adams school leaders to other interested audiences.

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CHAPTER 4

SHARING PHRONESIS

4.0 Introduction

In this chapter, we turn to a consideration of how narratives of practice can be represented as occasions for reflection on practice and tested for narrative verisimilitude. As we have seen so far in Chapters 1 and 2, the practical wisdom of school leadership can be accessed through interrogating the locally-designed artifacts about which practitioners care. Chapter 2 discussed how multimedia representations can act as "reality checks" on the quality and evocativeness of narratives of practice, closing an iterative loop as suggested by research in reflective ethnography (Altheide and Johnson, 2000). Chapter 3 showed how the resultant data can be used to form narratives of practice which re-weave the systemic interdependencies among practices and artifacts, representing the context of practice while disclosing the patterns of how leaders frame and solve the problems of their practice. In this chapter, a trial method for sharing practical wisdom is developed and deployed with practitioners both familiar and unfamiliar with the practices represented. The development of a multimedia version of the Breakfast Club narrative of practice (see section 3.3) serves as an occasion to investigate the verisimilitude of the represented practice, offering an interesting glimpse into the degree to which the Breakfast Club is both faithful to the actual events and evocative of related practices.

This chapter opens (4.1) by recounting the role of verisimilitude as a measure of validity for narratives of practice. Section 4.2 describes how the Living Curriculum for School Leaders (LCSL), a multimedia program designed to provide access to the practice of project-based science teaching, is used as a design framework to structure the construction of narratives of practice. In Section 4.3, a

user-testing process is described and analyzed using the LCSL case of Breakfast Club is as an occasion for reflection on practice with Adams school leaders as well as with practitioners external to the school. Section 4.4 offers a conclusion for the entire dissertation, including a perspective on how the method described here might be used in other prospectively in novel situations, in dysfunctional situations as a diagnostic tool, and how this investigation might influence current research efforts.

4.1 Verisimilitude Revisited

Reconstructed narratives run the risk of playing fast and loose with the events they describe. Because reconstructed narratives reassemble pieces of pre-existing narratives around an explanatory goal, certain features inconvenient for achieving the goal may be inadvertently omitted from the account, resulting in a "cleaner," but a causally and factually questionable, story. (c.f. Weick, 1996 pp. 25-30; Garfinkel 1967) Principled narratives of practice must provide a check on the story to make sure that it rings true, both to the people whose practice is being represented, and to practitioners qualified and interested in engaging in similar practices. In Chapter 2, I expanded on Bruner's (1990) criteria of verisimilitude as criterion for judging narrative as a counterpart to verifiability as the criterion for paradigmatic thought. As paradigmatic accounts rely upon verifying the correspondence between the analytic description and the actual state of affairs, verisimilitude locates the quality of a narrative in the way it rings true, or hangs together, for an audience. For verisimilitude, a story can be factually correct and still not be a good story; similarly, a story can be factually incorrect and still make sense to an audience. For example, an attorney can tell a story that recounts all of the facts of a sequence of events that still does not capture what "happened," while an allegory or a fable can capture the gist of the same sequence while completely

disregarding the facts of the case. The secret is in the way the events "hang together" to make sense of complex, unfolding situations for an audience.[1]

Verisimilitude, however, is more than a static property of narrative. It represents an interactive quality of the how an audience reacts to and makes of a narrative. Verisimilitude describes how a narrative comes to life for an audience. Accessing verisimilitude means allowing an audience to not only read the narrative, but to reflect on what it means, whether it makes sense, and whether it is appropriate for their interests. It is this sense of *interest* that makes it difficult to develop a general theory or criterion of verisimilitude – and because the interests of different audiences differ, no universal principles of narrative verisimilitude can emerge. However, measures of verisimilitude, determined on a case-by-case basis, can point to general patterns of sense-making. For example, a narrative of practice concerning how a policy was developed via complex negotiations among state-level officials may illuminate the machinations of the state bureaucracy, but have little interest to local practitioners. The level at which the narrative is constructed, in this case, as an account of the tradeoffs of the policy-making process, will appeal to a some kinds of practitioners differently than for others. The degree to which the narrative actually recounts the process as it happened is thus different from the ways that differently situated people react to the narrative. On another level, those whose practice is documented in a narrative of practice bring a different sense of verisimilitude to an account of practice than casual observers.

Narratives aimed at communicating practice in ways accessible to practitioners need to represent the appropriate level of context in order to bring out the task

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[1] Verisimilitude has received a different treatment in recent discussions in the philosophy of science. Popper (1963; 1972) used verisimilitude as a way to understand how scientific theories, which by definition cannot be true, can come closer and closer to approximations of truth. For example, Einstein's physics is more true than Newton's, whose was more true than Aristotle's. (For a discussion of Popper's notion, see Tichy, 1974) While Popper's discussion of verisimilitude does address the degree to which a theory *as a whole* has predictive value, his discussion of

structures in the midst of the details. In this research, verisimilitude is used as the general measure of how well narrative designers achieve this task – how well the story represents the task structures of the practice in forms that can help practitioners reflect upon and understand their practice. There are two critical perspectives to consider in examining the verisimilitude of reconstructed narrative:

1) Internal audience (testing with the practitioners whose practice is being represented) – Did we get the story right? Did we leave out pieces? What occurred to you as you reviewed the narrative?

2) External audience (testing with similarly situated practitioners in other settings) Does the story make sense? What is missing for your ability to do this in your school? Is the case an example of something you'd like to try?

Observing and guiding practitioners as they interrogate the story provides our central test of narrative verisimilitude. Drawing on the perspectives of internal and external audiences helps to refine the narrative by helping the authors to focus the message on the pedagogical essentials, resulting in a more compelling story. The study of human computer interaction points the way toward how we can address questions of verisimilitude in reflection on narratives of practice. The construction of multimedia, case-based narratives of practice allow users to interact with cases, following their interests and questions, navigating the system in order to make Here we offer the outline for a test of verisimilitude in narratives of practice grounded in two key steps:

1) Section 4.2 – the construction of interactive, multimedia narratives of practice that allow audiences to press and question the narratives for areas of interest; and

2) Section 4.3 – user testing procedures to understand the ways in which practitioners react to and reflect on narratives of practice.

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verifiability locates his account of verisimilitude in what Bruner (1986) would call a paradigmatic theory of truth.

4.2 LCSL: The Design of Multimedia Narratives of Practice

Our efforts[2] to build multimedia narratives of practice is grounded in recent research on the National Science Foundation funded Living Curriculum Project. In the Living Curriculum, multimedia cases of exemplary school teacher and leadership practice are constructed to serve as guidelines for the practice of interested practitioners. Through the development of these cases we have learned the power of representing complex, tacit knowledge through case production for participating teachers (c.f. Shrader, et. al. 2000) Multimedia narrative cases have several notable characteristics (IERI, 1999):

- *portability* – narratives can be used beyond the occasion of development to support reflection in other contexts;
- *permanence* – represented cases, stored on computer systems, provide a concrete point of reference that can referred to on subsequent occasions;
- *depth and range* – individual themes can be explored either thematically or chronologically depending upon the interests of the user; and
- *concrete* – cases enable practitioners to make tacit knowledge explicit and sharable among community members.

The Living Curriculum for Teachers (LCT) project had developed a indexed video-based case-narrative of how the teaching of sophisticated project-based science curricula unfolds over time. Here I present an account of how the Living Curriculum for School Leaders (LCSL) followed the video case-narrative lead of LCT through the design of a HTML-based prototype of Breakfast Club as an occasion for narratives of practice. We used an ASK-system (Schank et. al. 1993/94; Ferguson et. al. 1992) design architecture as a means to guide users through the narrative through the development of a system of interlocking questions. Following ASK system architecture, follow-up questions were indexed

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[2] The prototype design work for the Living Curriculum for School Leaders was completed and reported upon by Baylen Linnekin in Summer of 2000.

and cross-indexed to give a sense of interaction with the practice considered. Video selections of leader interviews or of the meetings themselves were included to supplement the hypertext system to give a sense of what Breakfast Club meant and looked like to practitioners.

Our initial design effort used several key questions to help users navigate the Breakfast Club case. The system design was focused around nesting sub-questions relevant to user concerns and to the main threads of the Breakfast Club narrative around four main questions:

Table 8 – Question hierarchy for LCSL Ask System

What should I know about Adams School?

- Why do we tell a story of successful collaboration — Breakfast Club — at Adams School?
- What are some of the internal programs at Adams School that encourage collaboration?

What are the origins of Breakfast Club?

- What difficulties did the school initially encounter when developing and implementing Breakfast Club?
- How did Adams School overcome initial obstacles to implementing Breakfast Club?
- Why did attendance at Breakfast Club meetings improve?

How does Breakfast Club work?

- Do the same teachers repeatedly present, or does everyone participate?
- What are the norms that govern Breakfast Club?
- What does a typical teacher presentation of research look like?
- How do teachers react to research presented by their peers at Breakfast Club?
- What are some of the themes that guide collaboration at Adams School?
- How do teachers use their classroom experiences as a collaborative teaching and learning tool at Breakfast Club?
- What is the role of administrators within Breakfast Club?

What are the keys to the success of Breakfast Club?

- How does Breakfast Club invite teachers into Adams School's power structure?
- What is an example of how Breakfast Club invites teachers into the power structure of Adams School?

- What should I know about Adams School?
- What is Breakfast Club?
- How does Breakfast Club work?
- What are the keys to the success of Breakfast Club?

These questions were chosen as our initial best guesses to help users frame the context, identity, procedures and progress of the Breakfast Club. We broke down the narrative developed above into sub questions that would follow from these four key questions, and presented the narrative in a basic HTML-format. To incorporate the relevant aspects of the narrative, a site map structure organized the relevant information. For example (see Figure 10), we organized the results for the practice of collaboration at Adams into several key points with follow-up questions designed to guide the user to related issues. The video selections on the right of the screen illustrate the main points made in the text; the navigation buttons on the left of the screen help the user to navigate a path through the narrative. Our prototype LCSL case-narrative contained twenty-eight screens with twenty-three nested questions, six video-clips, and several related artifacts such as sample meeting agendas and reading lists. After several weeks of testing the system to see whether it made sense to the designers, we were ready to test the verisimilitude of the narrative with internal and external audiences through user testing.

One of the challenges of constructing the LCSL prototype was to capture the nuts and bolts of how the program was constructed while not reducing the representation into a proceduralization of Breakfast Club. We did not intend to represent Breakfast Club as a silver bullet that schools could use as a sure-fire method to construct professional community in their schools. Rather, we

Figure 10   LCSL 1.0 sample screen

Living Curriculum for School Leaders

Toolbar

Previous Page

Site Map

Help

How do teachers use their classroom experiences as a collaborative teaching and learning tool at Breakfast Club?

In this example of a Breakfast Club discussion, several teachers were involved in a consideration of the merits of certain instructional strategies with Difficult groups of students. In the first clip, the teacher-leader singled out "activity boards" and "learning centers" as methods of involving students in project-management activities. One teacher responds with a comment about how these methods work in her classroom.

In the next clip, another teacher responds that, "It didn't work for me the first time either, or the second time. I had to realize the amount of structure I had to build into the activities before [the children] would be engaged." This type of open exchange in which teachers admit that espoused strategies exchanged did not work for them, and in which they looked to their peers for advice, characterized many of the Breakfast Club conversations.

What does a typical teacher presentation of research look like?
How do teachers react to research presented by their peers at Breakfast Club?
What are the keys to the success of Breakfast Club?

Click on picture to see video example

envisioned the Breakfast Club case as a representation of the practical wisdom that made the program possible. In order to tell the story of the practical wisdom, it was necessary to develop a well-articulated account of the particulars of Breakfast Club itself. In line with Aristotle's account of *phronesis*, without the particulars, the wisdom would make little sense. Still, a representation of the particulars of the

program, i.e. the forms used to organize the agenda, the readings used, the meeting schedules, threatened to become the message of the representation, encouraging practitioners to use the artifacts as represented rather than as a occasion for reflective practice. Too many details could turn Breakfast Club into a *techne*, a portable designed blueprint whose implementation might promise a replication of the results seen at Adams.

To avoid either the abstraction of wisdom disembodied from context, or the details of the context seen as becoming the whole system, we relied on a series of questions designed to help the user navigate through the details of the program toward the larger issues raised by the challenge of creating professional development in schools. Our initial effort at designing these questions was directed toward addressing the questions that school leaders were likely to ask in considering a new program for their schools. Some of these questions, to be sure, would focus on feasibility issues such as meeting times, resources and materials. But in our experience, many school leaders would ask questions, such as how Breakfast Club would promote professional community, how teachers were invited into the program, and how teachers used their experiences as occasions for discussion, designed to surface the practical wisdom of Breakfast Club. By weaving these issues together in a single, coherent system, we hoped to preserve the systemic interconnection of practice and wisdom that we found in documenting Breakfast Club practices at Adams.[3] While some practitioners may indeed walk away from the Breakfast Club as a recipe for developing professional community in their schools, we hoped that the integration of questions designed to help users

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[3] One intriguing suggestion, offered during my dissertation defense, was to use the DCAM method itself as a prompting framework to help school leaders construct cases based on the significant artifacts in their schools. By engaging in the practice of representation itself, rather than observing an already represented artifact, leaders might be more likely to reflect on local practices through the artifacts they helped to develop.

reflect upon the wisdom of such practices might lead users away from procedural issues and toward the *phronesis* of professional community development.

4.3 User Testing

  User-testing has long been recognized as a key aspect of the system design process in the fields participatory design and human-computer interaction (c.f. Schuler and Namioka, 1993; Nielsen, 1994). The intention of user-testing is to develop a sense of how users navigate a system in order to inform an iterative design process. In our user-testing process, we guided 14 users though the system, talking about the choices they made in navigation and their observations on the direction and quality of the system content. Our internal user pool included four teachers and administrators from Adams, our external user pool included one educational administrator not affiliated with a particular school, four urban high school teachers and administrators and five rural school district administrators (a superintendent, two principals, a curriculum director, and a business manager). Each user spent about an hour navigating and reflecting upon the system.

  We began the user testing process with a brief questionnaire designed to give us some background on computer literacy and Internet experience. Rather than asking questions to lead users through the system, we were interested in the sense the system would make to a practitioner who would use it as a resource for guiding practice. As a result, we let users find their way through the systems based on their interests. Some users treated the system as a page-turning program, while other considered which of the follow-up questions would help direct their paths. As users navigated the system, we asked probing questions to discover the reasons for their comments and choices. After we transcribed each of the sessions, the data were coded in three dimensions: answers to prompted questions; general and specific system suggestions; and emergent themes. In the analysis that follows, we will focus first on the issues raised by the Adams faculty and staff in reviewing the

case, then turn to the external audience responses to our the Breakfast Club narrative of practice.

4.3.1 Internal Audience: Adams Leaders

We conducted a user testing session with four members of the Adams school community : two teachers, an assistant principal and the language arts-coordinator. Like the external audience, the internal audience commented on usability and coherence issues, making suggestions about the intelligibility of follow-up questions and the ways in which video was used in the case. These comments were used to shape the subsequent look-and-feel and navigability of the system redesign. Here I will highlight two themes that emerged from the internal audience user testing: the ways in which Breakfast Club served as a condition for subsequent professional development programs at Adams, and how engaging in the Breakfast Club case served as an occasion for reflection on practice.

4.3.1.1 Breakfast Club as a condition for subsequent development.

The case served as a spark for helping users to reflect upon how Breakfast Club served as a resource for subsequent initiatives at Adams. Our Design Cycle Analysis Model (p. 17, Figure 1) suggests that artifacts developed from prior collaborative design processes can become institutionalized and serve as conditions for the possibility of subsequent design efforts. Understanding how artifacts become resources is a key aspect to untangling the iterative, systemic nature of leadership practice in schools. Adams users noted that several key programs resulted from Breakfast Club. The language arts coordinator noted that "out of (Breakfast Club) comes Teacher Leader, as an extension of it." (G 19:35) Teacher Leader (c.f. above, p. 20) is an on-going program, started in 1998, that allows teacher to lead half-day in-services on innovative instructional practices.

> After we read the research, there were teachers who wanted to try
> whatever we were reading about. They became the experts, and they

became teacher leaders as they reported back on what they found

interesting in their classrooms (G 19:38).[4]

The middle school also created Teacher Talk as a spin-off of Breakfast Club. In Teacher Talk, faculty members would articles lead discussions as the main agenda for a faculty meeting. At first, Teacher Talk focused on issues of adolescent development, but in recent years Adams "really started focusing in on literacy. Everybody teaches literacy" (W 21:34), bringing the agenda of Teacher Talk in line with the primary school Breakfast Club agenda.

Breakfast Club has also led to an increased sense of the faculty as pedagogical experts both within and outside the school. This perceived level of expertise on the part of the faculty helped several teachers to take a leadership role in the professional development program of the school. An administrator commented that:

> I guess that in an extension of (Breakfast Club), because when we started
> reading the research on reading and writing, our teachers started to
> become in-house experts — now they are also going outside of Adams to
> be experts (G 25:00).

Teacher Leaders and Teacher Talk became two venues to express this new-found in-house expertise. However, this expertise began to find less formal outlets as well. The expression of this expertise seems to create a self-perpetuating culture that helps indoctrinate new faculty members into the expectations of the Adams community. One teacher commented that:

> a couple of weeks ago, one of our math teachers presented a beautiful
> workshop on integrating math with other subjects. We found that a lot of
> our new teachers were not exposed to the whole idea of teachers teaching

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[4] The format "G 19:38" is used here and in the following several sections to refer to the time and

teachers. They were surprised to see that it happens all the time here. We no longer have to bring in (consultants), when we have people on our own staff who have researched it to present what they know (W 23:42)

New teachers are slowly invited into the professional community at Adams, first asked to observe, then during their second or third year, encouraged by the Language Arts coordinator or the Assistant Principal to lead one of the formal Breakfast Club or Teacher Talk discussions. At the core, there seems to be a group of teachers who participate and lead many of the faculty discussions. For example, one teacher commented that a group of six veteran teachers had recently developed a literacy committee to discuss strategies for teaching reading and writing (W 31:36) A key opportunity for subsequent research is the degree to which the boundaries of this core are permeable, allowing teachers to move in and out from the periphery.

One final implication of having faculty members share expertise with colleagues seems to be an increased comfort with making classroom practice accessible to colleagues and as a legitimate topic for discussion in the school. Discussing and presenting on practice has recently made school leaders aware of the need to record examples of good teaching practice. Breakfast Club and Teacher Talk have both dedicated about 40% of their meetings to discussing existing teacher practice in the school. These discussions have relied mainly upon a teacher's recounting of her own practice. Adams leaders had begun to see the importance of developing a video-record of teaching practice in the school as an occasion for reflective practice. The school community had already been video-taped on many occasions by organizations such as ASCD. These efforts had even focused on a documentation of Breakfast Club as an example of innovative practice in the school. However, most of these video-taping opportunities were

source of the reflective interview user test transcript cited.

developed to communicate Adams practices to external audiences, rather than to promote reflection on practice within Adams. To the end of using video in professional development activities, an administrator noted that:

> Another new thing that has branched off is the video-taping of teachers who have been teaching what we are studying, We have also been trying to organize teachers to go into each others classrooms (R 44:30).

The extension of professional community from teachers *reporting* on their own practices to teachers *documenting* each others' practice was still in the planning stages as our research concluded at Adams.

4.3.1.2 Breakfast Club as an occasion for reflection on practice

The Breakfast Club case also sparked leaders to reflect on the practices of teaching and leading in the school. One general theme is that the Breakfast Club seems to have set the ball rolling for the discussion of instructional practices among teachers and leaders across the school. In viewing the screen about "coming to terms with innovation," one teacher remarked that:

> You don't realize it when it is happening, but it really does. It (Breakfast Club) brought changes for teachers to be more receptive to practice. I know it happens, but it is good to really hear it. First we had Breakfast Club, then Teacher Talk, then Teacher Leader, and you see it continue to keep going. Sometimes you forget where it really started from (W 40:40).

The teacher continued to remark how the extended experience with sharing ideas in Breakfast Club seems to have alleviated some of the fears faculty members had about sharing their instructional practices:

> (Now) its not so scary to bring in a new idea, and to try it out. It makes it less intimidating. Because some people are not so receptive to new ideas – change is a hard thing for teachers to deal with. But when you see the

little branches reaching out, you see that change has really taken place (41:42).

The "little branches" reaching out seem to indicate the slow building of mutual trust and willingness to talk about instructional practices in the school as a result of prior discussions such those that take place in Breakfast Club. This, again, calls into question the tangled cause-effect relation of programs like Breakfast Club to the establishment of professional community in the school. The retrospective accounts of Breakfast Club that comprise the majority of the narrative of practice indicate make it difficult to determine whether the "little branches" are a result of Breakfast Club or of other, ongoing changes in the school environment. A weaker claim would be that several of the practitioners at Adams report that there is a causal relation between Breakfast Club and the development of professional community, and that programs like Breakfast Club, if implemented in the ways implemented at Adams, have a chance of producing similar effects at other schools. For the purpose of documenting practical wisdom, the weaker claim is sufficient. The phronetic emphasis on particulars casts doubt on whether initiatives that grow organically from a system of complex school practices can be transplanted to serve similar purposes in diverse settings. The point of representing *phronesis* is not to transfer a product from one context to another, but to help practitioners get their heads around the ways in which Adams leaders understood and dealt with the problem of professional development and community. As we have seen with the use of DCAM to create a narrative of practice, the insight presented here is to express the wisdom embedded at Adams through a reconsideration of the problems seen and solved by similarly situated practitioners at other schools. The "little branches" noted by the teacher above can thus be traced back, through the artifact of Breakfast Club, to how the problems of professional development and community were framed and solved by Adams practitioners. Thus, while the artifact itself might be portable, the important part

of the represented case is to link the wisdom that generated the artifact to the problems the artifact was intended to solve, and to trace the subsequent development of the problem through the subsequent development of the artifacts in the school. Tracing this network of problem-setting and solutions, through corresponding artifact, provides a rich occasion for reflection whereby the flame of practical wisdom at Adams might kindle a similar spark in the practice of other school leaders.

The user testing data revealed several categories of more specific reflections on the practice of leadership at Adams. For example, leaders reflected on the role that Breakfast Club played in the *helping open up teaching practice* in the school. One teacher remarked that, before programs like Breakfast Club, teachers were reluctant to talk about instructional problems in the classroom:

> To admit when things didn't work, it took a long time to get to that point.
> After twenty some years in the system, in the beginning, you just didn't
> tell anybody if something didn't work in your classroom. It was always,
> ok, I'm fine, everything's fine. Then you look at the scores, and you
> wonder why some teachers, some classrooms are making these gains, and
> your children don't do as well (22:45).

Schools have long been known as institutions with a loose coupling between administrative and teaching practices (Weick, 1976). One consequence of this loose coupling was the "egg carton" model of school organization in which teachers received little organizational encouragement to share instructional practices outside the context of their classrooms (Lortie, 1968) The fight to open the discussion of teaching practice among teachers and school leaders was hindered by considerable institutional and occupational inertia. At Adams, Breakfast Club formed a key artifact in helping to establish a climate of sharing practice in which teachers could share their views on ideas that did not help to improve student performance. Hearing other teachers present the strategies they

used to improve test scores in their classes seemed to reduce the feelings of inadequacy and competition among several of their peers by opening up their innovative practices for review. A teacher remarked that Breakfast Club has made her more comfortable with the idea of sharing her own practice:

> Before Breakfast Club, I might have been too nervous to do this (present on my own teaching)…Throughout the years, it really makes a difference. Before this, when you are just closing your doors and nobody is saying anything, your just did your job and closed your door. Because when you are presenting, when you are talking about the article with your colleagues, and they all are accepting you, you realize that this isn't such a bad thing (42:50).

The resulting levels of trust from the implementation of programs like Breakfast Club points to a interesting consequence of artifact implementation. In this case, it is not as if Breakfast Club itself gave rise to an increased sense of professional community, rather, the implementation of Breakfast Club in the existing school culture helped, over time, to create a sense of trust among teachers and leaders around instructional practices. This was no silver bullet program, as school leaders noted, it took two years for over half the teachers to attend any given Breakfast Club meeting. The slow thawing of existing institutional prohibitions against discussing teaching practices seems to have been a consequence of the system of practices connected with Breakfast Club.

This openness to sharing practice seemed to lead to a greater degree of reflection on practice. In response to the Breakfast Club screen on the changes in teaching that have been made by Breakfast Club, an administrator noted that:

> Sometimes its good to be able to go back and see the effects of the changes we've made. Now we can do more than just look at the trends, we can make adjustments for them, we can modify them, We can look at

the changes we need to fit for our school. We can look at an article and
find the changes that are for us, the ones that we think will work (12:50).

The Five-Week Assessment program can be seen here as a co-evolving artifact
that both results from and supplements the development of professional
community at Adams. The process of coordinating instructional initiatives with
test performance deficiencies is a blurry process at best. Summative data resulting
from the mandated district assessments helped to show *that* there may be problems
with the instructional program, but with almost no indication of *where* the problem
is, and even less about *what* might be done in response. The development of
Breakfast Club allowed the school community to monitor the problems and the
virtues of instructional initiatives, giving school leaders a sense of which practices
were perceived as successful by teachers. Breakfast Club also opened a forum for
discussing potential programs that would serve as a common core of the language
arts instructional program in the school. The Five-Week Assessment program was
designed to offer some insight on how these initiatives progressed with respect to
mandated performance goals. The addition of formative data to the subjective
reflections of Breakfast Club helped teachers and leaders get a better sense of
where current initiatives were headed, and to provide an overview of where gaps
still existed. Taken together, the Five Week Assessment and Breakfast Club
provided complementary tools for program development, giving school leaders a
better handle on instructional leadership efforts in the school. The emergence and
sanctioning of the Four Blocks Language Arts program as a school-wide
framework for literacy teaching was the direct result of the confluence of
Breakfast Club and the Five-Week Assessment.

Another effect of Breakfast Club noted in the reflective interview was the
emergent *ease with which teachers used and listened to research-based findings in
their discussions and practice*. An administrator commented that Principal

Williams played a major role in helping teachers use research to inform their teaching:

> Initially, (when Williams first came to Adams) there were a number of teachers who were not given to change, and they stuck together…Dr. Williams brought on board a lot of research…whatever was going on in educational research, she would bring in the articles (for us). She also provided us the opportunities to go to conferences (outside the school). She really turned it around (22:10).

This emphasis on integrating research with teaching formed the cornerstone of Breakfast Club. This can be seen as another way of opening up teaching practice to alternative views. Research-sanctioned teaching methods provide not only an occasion for discussion, but also a corrective for the possibility of preventing the in-breeding of teaching practices. One danger for a professional community designed around the development and reliance upon of internal expertise is the possibility of proliferating prevalent, but ineffective, teaching practices. Using research-sanctioned practices as an occasion for discussion and for experimentation brings in new ideas to invigorate existing practices, encouraging teachers to discuss how they are incorporating new practices as well as reporting on how existing practices unfold. One administrator remarked how Breakfast Club then gave teachers an opportunity to continue to review research on best practices in language arts teaching:

> In the classroom, you can lose touch with what the research says about what works best in the classroom. For the primary teachers, it also gives an opportunity to read more than children's books. It gives them an opportunity to read books with an adult vocabulary. And if you've been out of school (for yourself) for a long time, it keeps you in contact (10:13).

It is difficult to support a strong claim that Breakfast Club creates this kind of reflection that leads to the integration of research and practice. The space opened up for teachers and leaders to interact with research in this fashion may be a result of working together and sharing ideas over the years, and it may be that only a few teachers and leaders are comfortable with this kind of sharing. Still, it is significant that the teachers and leaders involved in this occasion for reflection on practice credit Breakfast Club with serving as a catalyst for a using research to inform practice at Adams.

In another context, school leaders noted the importance of documenting existing school practices in the event of a change in leadership. Sensitive to the phenomenon of innovative practices evaporating when leaders move on, Principal Williams consulted with Northwestern researchers about documenting practices in order to preserve the spirit and structure of the innovations for the next generation of leaders. The use of video records of practice would serve a similar function to those reported here – records of practice would act as occasions for reflection on practice, helping future school leaders understand the design rationale for inherited programs. As of this writing, the leadership team at Adams is in transition as Williams and Tracy have moved on to other positions in the district. It will be interesting to observe how (and whether) programs like Breakfast Club survive the transition and continue to act as catalysts for professional development under the new administration.

The test of verisimilitude with the internal audience at Adams showed us several characteristics about the Breakfast Club case. First, school leader did not offer direct, substantial remarks about the accuracy of the our representation of Breakfast Club. They did, however, respond to the representation with suggestions about what was missing from the case, and what the case reminded them of in reflection. Although we did not push the issue, we regarded these insights as signals that Adams' users recognized the characteristics of Breakfast

Club enough to suggest areas that needed to be strengthened by additional material. These suggestions need to be taken into account in the redesign of Breakfast Club case and subsequent cases, both in the form of materials that would need to be added to heighten the fidelity of the representation, and as cues that would prompt users to reflect upon their own practice.

Second, because we wanted Adams users to feel their way through the case, we did not offer many prompts for their comments other than to ask them to comment on aspects of the case they found to be confusing or lacking in content. The open-ended nature of the user test, which may have helped to create an atmosphere in which the users felt comfortable offering their insights about the case, also inhibited our ability to probe into the flaws in how the narrative itself enabled or prevented users from interacting with the narrative. In designing the our user-testing protocol, we bumped into some of the limits of the human-computer interaction (HCI) literature on usability testing. Much of the HCI research on usability (e.g. Lewis and Rieman, 1994; Nielsen, 1997) is directed primary at interface design testing, and seems to adopt a content-neutral perspective on the nature of the information conveyed by the system. Our interest in user-testing as a means of testing for verisimilitude pushed us to use the generic interface-design frameworks as a basis for qualitative research tools designed to tell us about the content as well as the interface of the Breakfast Club system. While our initial efforts to use the Breakfast Club system as an occasion for phronetic research relied mainly on user reactions to the case design, subsequent iterations of our user-testing process will need to flesh out the user-testing of system content and design as a legitimate method to cull qualitative data about practical wisdom.

4.3.2 External Audience

We tested the system with ten practitioners unfamiliar with Adams or with Breakfast Club to get a sense of what impression the program would make for

external practitioners. These included practitioners from urban and rural schools, teachers, building and district administrators, as well as a program coordinator for an urban arts program not affiliated with an individual school. The purpose of the external user testing was to primarily to gauge whether the case itself provided a coherent view of the artifact represented, and secondarily to determine whether Breakfast Club would be a viable option for practitioners to implement in their schools. During the course of the external user testing process we asked several questions designed to give us feedback on key aspects of the system. These questions concerned both system design issues (video quality) and verisimilitude issues (*what did Breakfast Club remind you of in your school*, and *would Breakfast Club work for you?*). In the following section, I will provide a review of user responses to the questions designed to address verisimilitude issues These questions included the following:

1) (How) was the video relevant to the case presentation?
2) What does the program remind you of in your school?
3) Would Breakfast Club work in your school?

4.3.2.1 (How) Was the video relevant to the case presentation?

We decided to incorporate video clips of reflective interviews and of the Breakfast Club in action into the system to create a sense of legitimacy for Breakfast Club. Many teachers and administrators seemed to be jaded by a bombardment of the latest and greatest educational innovations that will change their lives. We included videos to illustrate how innovations such as Breakfast Club grow out of real schools, and that show programs in action, rough edges and all, might bring a sense of legitimacy to the narrative that could make Breakfast Club a viable means to create professional community in some schools. In this sense, the videos would not make the argument for the efficacy of Breakfast Club,

but they might create a sense of authenticity for users to feel that this is a real program that works in a real school.

Early in the system testing, users seemed ambivalent about the relevance and value of the reflective interview video clips in the system. The video was perceived as something that could be safely skipped to get to the central message of the program. When asked about why she was skipping the video clips, one user commented that "we want to get through it, we want to see what it has to say. We need to get to the facts" (L 35:20). Another user commented that "I see the video as a some kind of extra, as fluff" (J 51:02). He continued to note the lack of context that set up a video of a conversation between several administrators: "At first, I didn't see the video as teacher interactions, I saw two teachers, or whatever, watching a video that I couldn't see, and I thought, ok, I don't know what's going on, and I got bored very quickly" (J 51:02). One user commented that a problem seemed to arise in the way the videos were presented in the context of the system. Toe get users to understand the relation of the video to the text, "you need to key into the videos in a direct way, so that people know what they are looking at…" (L 5:50). Another user came away from the reflective interviews with a sense of hollow rhetoric: "this (clip) sounds too much like a professional presentation" (R 32:10). She commented that the reflective interviews seemed too superficial to offer much insight:

> We all know we need to work smarter and not harder — but what is the story of that? How did that work?…I realize that (as an administrator) I am speaking from a glass house here, that if I would have people come I would probably say the same thing (R 43:40).

Even in this case, however, a comment about the limited value of the video helps to reveal an aspect of the rhetorical distance between what an administrator can safely say about her school, and about the kinds of information that would be helpful to practitioners in honestly evaluating a program points to an occupational

hazard of documenting leadership practice in schools. School leaders often see themselves as primarily responsible for putting a good face on their schools, and without an atmosphere of trust and support, may be reluctant to discuss the problems and tensions implicit in getting programs like Breakfast Club off the ground. While the distinction between the rhetoric and the practice of success provides a considerable obstacle to documenting practice, a case like Breakfast Club helps to close the distance between rhetorical description and actual practice. The case reveals whether the school really has found a way to work smarter, not just harder.

As they became more comfortable with the system, several users indicated that the videos of the Breakfast Club in action provided a stronger sense of authenticity. After watching an exchange between several faculty members during a Breakfast Club discussion, a user who initially expressed doubt about the value of Breakfast Club commented that this "actually sounds like it might be fun to get together and react to this stuff…there seems to be a comfort level here when they are actually talking with each other" (L 43:20). Other users commented that "I liked hearing the teachers talk," (J 0:30) and that the examples of teacher interaction "would be very good to have at the introduction of the session…as (an illustration) of what working smarter, not harder, looks like" (R 41:20). Another user, after listening to a teacher talk about the value of Breakfast Club, commented that: "she's being honest, that you are being a good teacher when you go back to school (and read articles), that (part of teaching) is continuing to learn things" (J 0:30). She continued: "I liked the (reflective interview) video clips, they give a sense of where the commitment came from in the program. She's very clear about the purpose — they used it as a task force to get the middle school organized" (J 16:57). However, the sense of verisimilitude evoked through the videos was not universally positive – seeing what the discussions looked like in action also led one user to critique the Breakfast Club setting:

(For an innovative program) I'm trying to envision something non-traditional as set-up, something that enhances the interaction between people in the meeting…that aisle and row thing should go! …(H)aving been down this road before, here I see a stereotypical, boring faculty meeting. I don't see anything here that is exciting to me…I just see blah discussions" (D 39:40).

For this user, the videos seemed to demystify the innovative aspects of Breakfast Club. The conventionality of the setting displayed by the video led the user to identify Breakfast Club with the tedium of a normal faculty meeting. The video served to ground Breakfast Club within the context of ordinary school – for some users showing the kinds of discussions possible for a school community to have, and for others to reveal the ordinary nature of the discussions.

Our user testing experience indicated once users were familiar with the general purpose and function of Breakfast Club, the video helped to illustrate how it actually worked in practice. The initial videos of leaders talking about Breakfast Club were intended to personalize the program, to give users a sense that there were real people behind this program. This design goal was perceived by many of the users as the presentation of talking heads that was not integral to understanding the case. Later in the narrative, however, the videos of Breakfast Club practice helped users to "see" what the program looked like in action. This suggests that judgments of verisimilitude are grounded in a certain level of familiarity. Just as cases are organized to illustrate general points, the video clips of Breakfast Club practice ended up creating a sense of what the described program actually looked like. This might be especially relevant in considering multimedia narratives of practice in which the medium of presentation itself presents an obstacle to familiarity. The novel experience of using video clips in a user-directed narrative made it difficult to determine whether users were commenting on the experience of using videos itself, or the experience of using these particular videos. Perhaps

once such multimedia narratives are ubiquitous the ability to ascertain the quality of the media will be easier to untangle.

4.3.2.2 What does this program remind you of in your school?

An important aspect of verisimilitude is measured by the kinds of similar cases are evoked by the narrative. Since *phronesis* is constructed from prior experience, evoking similar prior experiences in users helps to understand where artifacts like Breakfast Club fit in the context of user *phronesis*. Sorting these remindings into categories helps to both place Breakfast Club within the context of current understanding, and to build in cues for helpful remindings in system redesign. Here we highlight the several remindings that emerged in the analysis. Breakfast Club reminded users of:

- a computer-based resource for best practices
- a catalyst for district-level outcomes
- an example of issue-based faculty community
- a technology-based faculty practice discussion group

Computer-based resource for best practices

One group of users saw the system as a computer-based resources about best practices, and was reminded of other best-practice resources, such as journals and newsletters. One user remarked that she was not as familiar with electronic presentation of resources, and was more comfortable with print versions of the resources (P 6:30) This user said that she could not tell much of a difference between this case and similar cases presented in print journals. Another user was reminded of other computer-based resources for school leaders, such as listservs and web pages (K 7:42). This user had used listservs and electronic journals in the past, and had signed up for several listservs. He mentioned that the information conveyed by computer based resources was sometimes overwhelming, and that he had difficulty keeping up with the about of information available.

Outcomes catalyst

A district administrator commented that the design of Breakfast Club seemed to parallel current initiatives in her district: "It is a lot like what our professional development committee is trying to do…it has taken on a nice life, it has become a real group of colleagues" (R 11:50). To this administrator, Breakfast Club seemed to be a vehicle to help the school community achieve the desired ends of developing professional community while building worthwhile professional development programs for the district. The administrator picked up on the catalytic aspect of Breakfast Club as a means to achieve the desired end of developing professional collegiality among teachers and administrators. For her,

Figure 11 Place of district-level administrators in instructional leadership

District-level administrators	Principals
_____ : : _____	
Principals	Teachers

the specifics of the program did not appear as interesting as the ultimate effect the program had on the Adams school community. This insight appears to extend an earlier distinction (Section 1.3) made on the relation of leadership to teaching in schools: while teachers teach, school leaders help establish the conditions for the possibility of successful teaching and learning in schools. It would be interesting to consider whether there are subsequent stages of condition-establishing at work in leadership activities further from the classroom. In other words, does the relation that holds between district administrators and principals parallel the relation between principals and teachers? (Figure 11).

Similar programs: Faculty Smoker and Technology Club

A group of users at a high school were reminded of two programs similar to Breakfast Club that exist or had existed in their school. One pair of school leaders was reminded of how the smoking lounge had provided an open forum for teachers to talk with one another about the issues of the day:

> If there was anything that helped us to be better teachers, it was our smoking lounge….You could blow up there, but it was a sacred space, stuff stayed there and never left the room. If you were an administrator, you had to close your ears. But we could generate ideas, at all kinds of levels…When we moved to a different administrative model, we asked, well, who should sign this? We all sort of collaborated… (L 59:30).

This leader picked up on the teacher collegiality and collaborative nature of Breakfast Club in noticing the similarities to the smoking lounge. An administrator in the same school commented how in the smoker, as they called the smoking lounge:

> there were just as many non-smokers as smokers. When they (the administration) disbanded it (the lounge) and kicked the smokers out of the building, the thing fell apart…it created a gap in the morale of the school (J 58:25).

In the mid-1990s, the school administration reacted to pressure from certain faculty members to disband the smoking lounge. This created the (perhaps) unintended consequence of taking away a common meeting-place for the teachers.[5] One user commented that it is "amazing what one little thing can

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[5] Faculty members commented that, in their view, the school administration may have been threatened by the teachers associated with the smoker, and used the anti-smoking feeling as an excuse to close the lounge. Taking away this meeting place seemed a symbolic measure to re-

do…this faculty does not have a place to communicate. It has been five years now" (L 58:51). A key difference between the smoker and the Breakfast Club is the focus of the reported discussions. Smoker discussions tended to dwell on emergent strategic and management issues concerned with student behavior and negotiating the school bureaucracy, with little emphasis on sharing instructional practice. The community developed at the smoker seemed directed less toward teaching and learning and more toward sharing strategies to survive the everyday organizational and management pressures of teaching.

The absence of the smoker as a place to congregate created a void in the teacher community at the school. Several leaders commented how a recently developed, on-going program, Teaching with Technology, was beginning to fill that void. Started in tandem with a large-scale effort to install computers throughout the school, Teaching with Technology was a monthly discussion group designed to invite teachers to share their ideas about how the technologies could be used in day-to-day instruction. One teacher commented that

> it helped to create a common ground — there were people who decided on their own that they wanted to know more about the technology….Technology has opened the doors in this building; people had become a little stuffy, and this has re-created the "wow" that we had 20 years ago. That was kind of lost, now you are seeing something that rekindles the spirit (D 56:08).

Another teacher noted the similarity in the sense of voluntary professional community created by both Breakfast Club and Teaching with Technology:

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center power in venues the leader could control, as opposed to places where teachers could develop a sense of independent solidarity.

what was nice about Teaching with Technology was that it was a

voluntary, disparate group – not just your friends. We met about once a

month, and what was underlying the success of (the program) was a

feeling of professional respect. I see that in the Breakfast Club

discussions as well (L 00:01).

Teaching with Technology shared several characteristics with Breakfast Club. A

voluntary program, it invited teachers to share their experiences and insights about

their participation in an instructional innovation in the school. While a part-time

technology coordinator scheduled and conducted the monthly meetings, Teaching

with Technology were organized around presentations by teachers who had

developed interesting lessons using computers. Users did not note that while

Breakfast Club was focused initially on helping teachers reflect on research to

inform their practice, Teaching with Technology by-passed the research to focus

directly on the practice.

4.3.2.3 Would Breakfast Club work in your school?

As discussed above (Section 4.2), the main point of documenting *phronesis*

is not the replication of the represented artifact in local schools. The very concept

of *phronesis* would suggest that artifacts cannot be ripped from their native context

and transplanted somewhere else to achieve the original effect, rather, if artifacts

are implemented by similarly minded practitioners in similar contexts, similar

results may emerge. The representation of *phronesis* argues very much against a

"silver bullet" model of program implementation. However, nearly all the users

wondered about the obstacles and opportunities for implementing the program in

their schools. Here I will discuss four key issues that emerged Breakfast Club

would work at their schools: the (in)adequacy of resources provided in the case to

guide the implementation of Breakfast Club; the appropriateness of Breakfast Club

for audiences other than a primary school; how (or whether) an insider/outsider

culture that can grow from Breakfast Club-like programs, and how a school can tell whether a program like Breakfast Club is working.

       Resources Time to meet and the availability of breakfast proved to be the main concerns for external users in reflecting on the resources needed to get a Breakfast Cub off the ground. One teacher commented that, in her school, "time is really the enemy, we have faculty members coming from all distances, with families, how could we schedule this so that people would want to come?" Time for teachers to prepare for and participate in the discussions was also an issue (L 3:39). At Adams, the time to meet issue was addressed by making the meeting voluntary, beginning before the school day started, and by providing breakfast to participants. The breakfast itself, however, provided an interesting area of concern as a contended resource to leaders in one district. The provision of breakfast, whether by the district or by school leaders, was resisted as a regular occasion for getting faculty together. Providing a meal was perceived in these cases as manipulation of faculty at worst, and as a needless expenditure of resources at best. One leader commented that "I think people would be really critical of it,…they would say 'why do we have to give them breakfast to get them to think'?" (R 53:45). Another leader in the same school commented that "I'd have to talk with the union reps first about the program — how would the breakfast be paid for? Would the cafeteria people make breakfast anyway?" (J 61:00). When told that the Adams principal usually provided breakfast from her own pocket, the district administrator remarked that "that would not make much of a difference — the faculty members would not want us to pay for breakfast. We eliminated lunch at faculty meetings this year because teachers thought it was a waste of money" (R 52:52). The opinion that "this was what faculty should be doing anyway" seemed to mitigate against providing an incentive to participate. Still, leaders in the district commented several times that their teachers did not have to opportunity to participate in Breakfast Club-like discussions. This discussion may point to how

Breakfast Club-like artifacts might serve as ways to surface significant obstacles to developing professional community, for example, among school leaders. Having an occasion to express obstacles to implementation can be a powerful means to make visible implicit theories-in-use that get in the way of instructional leadership, revealing the snags of how *phronesis* has developed thus far among school leaders. Breakfast Club, as represented in the LCSL, could serve as an example of a way to make visible implicit practices and as a guide to rebuilding *phronesis* on the model of the represented practice.

In the Breakfast Club case itself, external users thought that more of the material resources Adams leaders used to conduct and manage the program should be integrated into the system as downloadable artifacts so that implementers would not have to reinvent the wheel. A principal commented that "if you could come up with some suggested discussion topics, it might cut down the ramp-up period" (K 21:21). One teacher commented that "I would like to know where the research comes from (i.e. which journals) and who determines it?" (J 37:29); an administrator noted that "it would be helpful to have a list of the articles they used here, and the journals they found helpful for providing the articles" (R 36:30). While these are interesting suggested short-cuts, there are clearly trade-offs in the ability to provide generic catalysts for Breakfast Club implementation in other schools. It seemed important to the Adams community to develop a sense of the articles that seemed important to the local community. The Adams experience suggests that the fit between topic and audience matters, that generic topics designed to start the discussions may not ground Breakfast Clubs in local concerns. Other comments concerned the provision of meeting agendas, faculty memos, and sample readings to facilitate initial adaptation of Breakfast Club to local contexts.

Breakfast Club in Secondary Schools Language Arts instruction in many elementary schools, including Adams, spans across teachers at each grade level.

This spanning affords a common interest both collaborative inter- and intra- grade curriculum design efforts, and provides a potential common ground for cross-grade discussion around topics of interest to all teachers. The cross-school literacy initiatives at Adams, introduced and discussed through Breakfast Club, helped establish this common ground through requiring teachers to design and use a common language arts program throughout the school. Breakfast Club takes advantage of this common design effort to establish cross-grade level faculty discussion forum.

Several users questioned whether such a program would work at a typically more departmentalized high school faculty. Grossman and Stodolsky (1996) suggest that the department is the significant unit of organization for instructional leadership among faculty members in high schools. But whether the inter-grade dynamic of Breakfast Club-like discussions would follow a similar course among groups of subject-matter focused teachers was an issue for several users. One user related his experience with establishing a book club at the high school level that did not take off because, as he suggested, the reading was not integral to the daily practice of the many of his colleagues (K 2:30). The link that makes Breakfast Club vital to teaching practice is the common demand in the school that students achieve in language arts according to the program designed by the teachers. This makes learning more about the literacy program in the school of vital interests to the daily practice of teachers, in a way that a book club seems more peripheral.

Insider/Outsider Culture Several users commented on the potential for voluntary attendance programs such as Breakfast Club to create an insider culture within the school, in which participants in on the Breakfast Club planning and meeting would acquire inside information and access to resources closed to non-participants. One leader noted that Breakfast Club "could serve to unify the group, but it could also serve to fragment it" (J 46:50). She continued:

>This is what happened at (my old) school. The people in the group are
>the ones you are going to turn to, people you might start to socialize
>with…the same people seemed to be chosen over and over again. After a
>while, there was the sense that you played with the team, or you didn't
>play at all (J 51:50).

Finally, a teacher noted that "in a school this size, I could see and insider culture easily happening. If there is an insider group, the group the principal talks to, then you'd get invited to these meetings. If you aren't, you don't" (D 48:37). Adams school leaders stressed that persistent invitation to participate, together with establishing presenter schedules a year in advance, helped to mitigate the establishment of an insider/outsider culture. In practice, Breakfast Clubs began to serve the role of information distribution meetings as well as opportunities to engage in faculty-led discussion. For example, the principal usually took the final five to ten minutes of each Breakfast Club discussion either to announce opportunities for teachers to receive resources or upcoming obligations or to provide advance notice for upcoming instructional obligations. During the Breakfast Club meetings we observed, we noted that three or four teachers would routinely wander into the room during these last minutes to hear the upcoming news. Providing resources that all teachers could use thus provided another incentive for teachers to participate in Breakfast Club. User comments suggest that these strategies should be played up in the LCSL Breakfast Club case as way to inhibit the creation of an insider-outsider culture in a school.

How can you tell whether Breakfast Club is working? A key aspect of recent research on the effect of professional community has been to link the investment in creating community among teachers to student achievement (c.f. Kruse, Louis and Bryk, 1996: King and Newmann, 2000). The connection between Breakfast Club, professional growth and student achievement was a concern for users as well. One teacher commented that "This is going to conclude somewhere

with what? I would like to see how this led to change…how this had impacted their teaching more specifically, what works now and didn't work before" (L 53:40). Several users indicated that testimonials about how teacher practice changed would have helped make the case for Breakfast Club. Another teacher commented that "I see this (Breakfast Club) as a means for professional growth in the classroom…I still go back to school-wide results" (P 46:26). An administrator noted the lack of attention paid in the LCSL to how the Adams community evaluated the success of Breakfast Club. Clearly the teachers and administrators at Adams felt that Breakfast Club achieved important goals, but how could a school just trying it out know whether it was working?

> What criteria are they using to evaluate success? Attendance? Range of presenters? Effects on kids? These kinds of things would be interesting to put in here (R 51:05).

Elucidating these measures would be important for external users to understand whether Breakfast Club was achieving its goals. As measured by the peer interaction among teachers, one user, familiar with the culture of opposition between administration and faculty in many urban public schools, commented that the openness of the discussions portrayed in the videos was a clear sign of the success of the program at Adams (N 1:20)

4.4 Conclusion

The Living Curriculum for School Leaders Breakfast Club case proved an interesting experiment in constructing multimedia, non-linear narratives of practice based on the narratives of practice developed in Chapter 3. The design of the system into a question-based ASK system pushed designers to take user interests into account. The LCSL Breakfast Club case encouraged us to go beyond telling a good story to customizing a narrative based on the questions likely to occur to a practitioner interested the artifact. This transformation pushed us to radically

restructure the narrative from a passive, text-based representation of practice to an interactive, multimedia based representation. The question structure also pushed us to make the connections in the narrative clear, and to discard discursive points that did not clearly correspond to user interests. Reducing (or expansion, depending on your perspective) of the narrative damages the flow of a linear presentation, but adds an interactive component of user-directed perusal.

The main risk of a question-driven narrative of practice seems to be the loss of relevant context in highlighting the artifact as the main message of the system. In the question-driven Breakfast Club case, Breakfast Club itself is the featured product, and the *phronesis* of school leadership that the case was designed to show comes to take on a supporting role. As the user peruses the system, the practical wisdom of Adams school leadership forms the answer to many of the sub questions. For example, users wanted to know about the administrator's role in Breakfast Club's teacher-led discussions. The system provided the following information to users:

> The administrators in the Breakfast Club refrained from framing the discussion among the teachers, instead adopting the role of information distributor. For example, on one occasion one teacher asked whether a certain reading program was "mandated by the state or optional?" The faculty members looked toward the administrator in the room, the Language Arts Coordinator, who responded that the program was mandatory. On another occasion, near the end of a Breakfast Club meeting and following a session on envisioning the ideal reading classroom, the principal noted that the school was a recipient of a grant that would give each classroom teacher about $2000 for the materials and to help establish ideal reading classrooms in the school (Slide 12, LCSL prototype 2000).

Here the practical wisdom of Adams culled from the data shows that leaders refrained from making content-based contributions to the discussions. However, the way the information is presented emphasizes that this is what Adams' leaders *did*, not what implementers *ought* to do. This restraint may or may not resonate with other leaders conceptions of themselves as instructional leaders. School principals that helped to develop the initiatives, for example, might wish to take a more active role in subsequent discussions. Leader non-participation might also give the message that discussions of instructional practices are teacher-business, and not leader-business. Another screen addressed the issue of faculty attendance improved:

> At first, Breakfast Club meetings were sparsely attended. Apparently, teachers saw these initial efforts as unrelated to their essential responsibilities in the school. However, over time, the Breakfast Club was increasingly seen as the place for teachers to hear about current developments in the school community. One teacher noted that "Breakfast Club became the place to hear about what was going on" in the school. An informal expectation arose that teachers would take turns reviewing research and presenting their opinions of the research at Breakfast Club meetings. Within several years many of the teachers had presented articles. The artifact that began with an invitation to professional community became more and more a part of the institutional culture (Slide 16, LCSL prototype 2000).

Here we address a key issue faced by school leaders in implementing optional discussion programs like Breakfast Club: how to motivate faculty to attend. Adams school leaders could require participation at Breakfast Club, but would risk of union grievance. Helping to explain how patience and perseverance, together with providing useful information and access to needed resources, over time, made Breakfast Club a meeting that faculty members were interested to, rather than

compelled to, attend. Cultivating this informal expectation is a valuable insight for leaders of fledgling discussion program worried about initial poor attendance. The system thus tries to anticipate leader concerns with valuable practical wisdom from leaders who have already traveled a similar path.

The point of LCSL case organization is not to prescribe a particular view as much as to provide an occasion for reflection on practice. Having access to what similarly situated practitioners do and think gives leaders an opportunity to vicariously participate in the represented practice, providing the opportunity to "think through" practice along with successful peers. This vicarious participation would not work as well if the practice were represented as a finished product to be imported into native school contexts. Thus the system design tries to incorporate how Adams school leaders thought about and engaged in their work as much as possible to draw attention away from the artifact itself and toward the artifact as an occasion for reflection on practice.

One valuable outcome of the LCSL prototype was to develop and vet a template for use in structuring subsequent narratives. After reviewing the user-testing data, we revised the organizing question template to be used in the organization of subsequent cases:

1. What is (the artifact)?
2. How does (the artifact) work?
3. What are the benefits of (the artifact)?
4. What are the challenges of designing and implementing (the artifact)?
5. What is the school like in which (the artifact) was developed?
6. Would (the artifact) work in my school?
7. Find your question (access to the question index)

These questions seemed to address the basic concerns new users had in their initial interaction with the system. In a *phronesis* framework, practical wisdom need to be situated in a recognizable context for the lessons to ring true. These questions

are designed to give a users sense of the nature of the program, its function, and the constraints faced in design and implementation. However, the user testing process also pointed to developing a more detailed profile of the school for the purpose of creating a sense of legitimacy for the project. It appeared important to users to develop a sense that this was a real program developed in a real school. Video clips of the Breakfast Club in action helped create a sense of verisimilitude in this light, while statistics about demographics, faculty composition and student achievement were included to give a sense of the real world in which Adams was situated.

4.4.1 Redesign suggestions

The user testing process revealed several key suggestions subsequent system development. These suggestions cross system/interface issues and into content organization and conceptualization issues. Many of these suggestions are synthesized from the preceding analysis and are presented here to summarize the key findings.

4.4.1.1 Redesign issue 1: Integrating video into presentation.

The video clips presented in the system served to both introduce users to the key school leaders and to provide examples of practice. The clips used in the Breakfast Club case, as we have seen above, received mixed evaluations. While introductory clips designed to introduce users to the key actors at the school were seen as superficial and irrelevant, the clips of Breakfast Club in action were perceived as relevant insights into the represented practice that legitimized the program in the eyes of users. We continue to hold that developing an impression of the identities of the actors and the school is an important objective for the use of video in the system. In the system redesign, the introductory clips will be retained in order to achieve the original goals, but better framing devices will be developed to situate the clips with respect to the unfolding story. We will integrate more

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Figure 12 LCSL 2.0 Sample Screen

LeTUS > Living Curriculum > Living Curriculum for School Leaders

Living Curriculum for
SCHOOL LEADERS

All about Adams >Internal programs >Five Week Assessment

What is
Breakfast Club?

How does
it work?

Benefits

Challenges

About
Adams School

Would it work
in my school?

Find your
question

The Five Week Assessment program represents Adams' effort to
construct formative assessments in preparation for the summative
district-mandated standardized tests.

Several years ago, a team of Adams faculty and administrators reverse
engineered the ITBS and IGAP tests to understand the component
skills required for successful student performance in math and
language arts. The Language Arts coordinator took the lead in
developing assessment tools for the required skills. The instructional
program was tailored to cultivate these skills, giving teachers and
admnistrators diagnostic information about which students, skills, or
classrooms were doing well, and which were falling behind.

Results from the Five-Week Assessments are discussed at faculty
meetings in order to develop strategies to improve student
performance. Teachers whose classrooms did well on the assessments
are expected to take the lead in relating their instructional strategies to
their colleagues.

Teacher Talk

Teacher Leader

Five-Week Assessment Program

Next > Four Blocks of Literacy Curriculum Redesign Initiative

School Improvement Planning

examples of practice that highlight key aspects of the case, such as varied teacher

participation, the development of an insider/outsider culture, and administrative

participation to lend a sense of verisimilitude to the Breakfast Club and subsequent

cases.

Another issue that arose with the use of video in the Breakfast Club case was the removal of the cover of anonymity. In text-based narratives, names and locations can be changed to protect the identity of practitioners. Video, however, removes this cover and exposes the identity of practitioners to system users. This might not be much of a problem in documenting exemplary practices, where practitioners might well want credit for their work. However, the use of video in documenting problematic practices may make practitioners reluctant to speak about intractable issues at the risk of professional ridicule at best, or disciplinary action at worst. While making problems visible is a key step in uncovering possible resolutions, using video to identify the actors might well discourage the kinds of disclosure that reveal the authentic challenges of practice. Future versions of LCSL will need to resolve the conflict this conflict between disclosure and documentation in order for researchers to access and communicate problematic practices.

4.4.1.2 Redesign issue 2: Balancing linear and non-linear narrative path.

The narratives of practice developed in Chapter 3 provided a linear path through the problem-setting and –solving practices associated with their respective artifacts. The Breakfast Club case developed for the LCSL, however, eschewed a linear path for a user-guided question-based narrative structure. We found that the majority of users were unfamiliar with the non-linear narrative structure, and looked for cues that would help them figure out which screen was "next" in the narrative. Users often merely clicked on the first available link to get "through" the screens.[6] To help users new to non-linear narratives find their way through the

case, subsequent iterations of LCSL will include multiple cues to provide linear and non-linear direction through the system.

In this sample screen from the LCSL Breakfast Club version 2 case, we have built redundant navigation guides into the system. The buttons on the left of the screen guide users back to the initial key questions, while the nested structure of the screen address line below the LCSL image tells users where the current screen fits in the context of the larger question. Finally, the suggested destinations below the main text are structured to show where the user has been, and which screen would make sense to come next to preserve the narrative flow. The degree to which these navigation guides help to provide some linearity to users unfamiliar with hypertext narratives will be revealed in our subsequent user testing efforts.

4.4.1.3 Redesign issue 3: Situating Breakfast Club in a larger LCSL context

While the larger context of Breakfast Club in the LCSL has been alluded to above, the details of how the case would fit into a larger schema for representing practice has yet to be developed. As originally planned, the Living Curriculum would provide teachers, school leaders, parents, community members and students with information and support appropriate to engage in project-based science curricula. As we have seen in Chapters 2 and 3, however, the work of school leaders differs from the curriculum-focused work of teachers. In creating the conditions for the possibility of creative teaching and learning, school leaders work toward establishing professional communities in which teachers can feel comfortable trying and sharing new practices such as project-based science. Thus a key avenue for the development of the LCSL is to provide a catalogue of artifacts, rooted in the practical wisdom of local school leaders, that help

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[6] It was sometimes difficult to tell whether users were paging through the system because they wanted to complete the user test or see what else was in the system. In either case, the question-based organization seemed to be used as a generic cue to find out what was next rather than a substantive choice about which direction the narrative might take.

practitioners think about how to improve the conditions for teaching and learning in their own schools. These artifacts by themselves, however, may not achieve the same results when implanted in new environments. One of the points of documenting *phronesis* is to use artifacts to capture and communicate relevant systemic context that brought and continues to bring artifacts to life. The representation of Breakfast Club alone as an artifact aimed at creating professional community in schools is a necessary, but somewhat misleading, first step in constructing a systematic representation of local practical wisdom. Taken by itself, Breakfast Club is merely an artifact among thousands of other artifacts available to school leaders. Seen in light of its connection with the development of related artifacts, however, the Breakfast Club case comes into its own as a window into the practical wisdom of school leadership. Still, the construction of a single case was necessary first step in establishing a viable template to guide the construction of subsequent cases. The construction of cases around other Adams' artifacts, as well as artifacts from other schools, is the work ahead for LCSL development.

Figure 12   Situating the Breakfast Club in a wider LC context
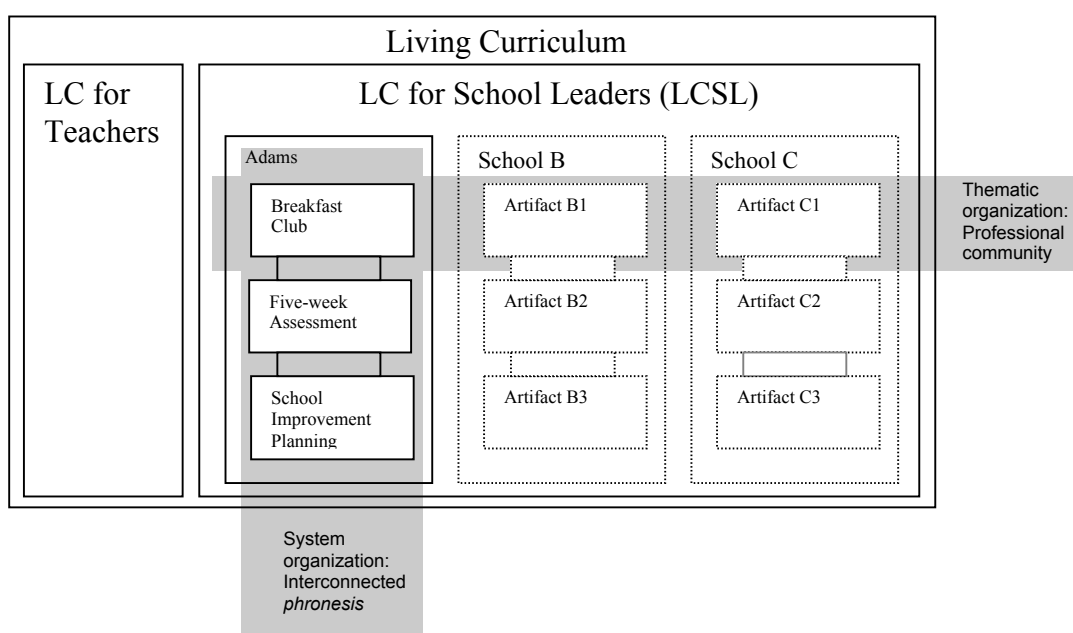
In this research artifacts have proven to demonstrate a systemic interrelation in their own development and in the development of leadership capacity in the school. Thus the school itself should be the unit of organization for the cases. In subsequent iterations of LCSL (see figure 12), the first level of organization will be around how artifacts are situated within the system of the school to give a sense of the *phronesis* of local leadership practice. The second level of organization will be a thematic index to direct interested school leaders to artifacts that have proven to achieve goals, such as the development of professional community or school improvement planning, relevant to school leaders. Integrating the systemic interdependence (and inherent practical wisdom) of artifact development and implementation with the need to provide practical answers to pressing practitioner needs will prove to be a key challenge in subsequent versions of LCSL.

4.4.1.4 Redesign issue 4: Representing the process rather than the artifact

Another approach to designing for accessing *phronesis* is to consider the LCSL system as a tool for reflection rather than as a catalogue of artifacts.[7] Up to this point, we have considered LCSL as providing access to the tools, together with their rationale for development and usage, that leaders have used in their instructional leadership work. The LCSL system artifacts were intended to spark users to reflect upon their own design and leadership practice through a careful representation of the problem-setting and –solving practices of exemplary school leaders. However, an alternative path to system design would be to cut to the chase by constructing a tool for leaders to reflect upon their own practice, unmediated by consideration of other artifacts. This tool might structure inquiry practices in ways similar to the tools designed by Reiser, et. al. (in press), which use templates to

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[7] I am indebted to Penelope Peterson for pointing out this alternative conception of system design and use.

guide users through the activity of argument construction. This alternative form of LCSL would be modeled on the research methodology developed in Chapter 2 and expressed through DCAM as a way to structure the reflective process.

A LCSL organized around reflection as a primary outcome would have the advantages and face the challenges of generativist discusses by Greg Shrader in his dissertation (Shrader, 2000). An ultimate goal of the Living Curriculum for Teachers (LCT) was to allow users to construct cases based on their own implementation of project-based science curriculum. The generation of multiple cases would then offer subsequent users a greater variety of possibilities for teaching the represented curriculum, and would afford users a chance to reflect upon their own practice through case design. However, the LCT retains the project-based science curriculum itself as a central point of reference–the curriculum acts as a hub that draws practitioners to the system as well as an occasion for reflection. In the LCSL, it is not clear that users would come to a system that offered only a chance to reflect on practice. The artifacts in LSCL thus serve as analogues to the project-based science curricula in the LCT – practitioners come for the materials and can stay for the reflection. A tool designed to foster reflection on local artifacts that disclose practical wisdom would supplement, but not supplant, the artifact-first approach to the design of LCSL.

The prototype Breakfast Club case for LCSL provided a good opportunity for us to test how verisimilitude might fare as a measure of validity for narratives of practice. The system characteristic that users noticed and named, the flaws and irregularities mentioned, and the programs and ideas evoked pointed toward the directions toward which the system needs to be developed further. The single case we chose to prototype also fell short of showing the interconnected nature of the *phronesis* of school leadership at Adams – in order for the systemic inter-reliance of professional development, assessment and planning to come through, the LCSL needs to include additional artifact cases as well as to develop the means to show

the interconnections within the system. Still, the Breakfast Club prototype established a template through which these further questions can be tested in subsequent system design.

CHAPTER 5

REFLECTION ON *PHRONESIS*

<u>5.0 Introduction</u>

Representing *phronesis* forms an alternative conception of how to conduct social science research. Flyvbjerg (2001) suggests that Aristotle's account of *phronesis* provides a legitimate method for social sciences to investigate human practice that aims neither at epistemic (i.e. scientific) knowledge nor reduces complex human practices to various *techne*. Flyvbjerg contends that *phronesis* is a uniquely perspective that allows social science research to stand on its own as a viable alternative to the *techne* and *episteme* driven efforts of scientific and engineering research. My research project aims to operationalize the phronetic perspective by helping researchers to use Aristotle's insights in practice. By maintaining the importance of the particular, the account of *phronesis* research developed here aims toward developing accounts of practice that aim not at generalizability, but at verisimilitude, relying upon interested local practitioners to choose relevant details and make sense of the represented practice as a vital aspect of the research practice. The cycle of field research, narratives of practice, multimedia representation, and user testing and redesign is intended to rigorously cull practical wisdom from the situation, hopefully yielding good, viable ideas situated in their native context that practitioners will recognize as peer practices to their own and find helpful in resolving the problems of their own practices.

In this final chapter, I will draw on the research presented here to make several observations about the results and implications of research on *phronesis*. First, in section 5.1, I will draw several conclusions about the relation of phronetic research to more conventional epistemic-based research methods. Properly

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considered, phronetic research should provide a sense of depth and legitimacy to complement epistemic research on practice. Section 5.1 considers how the narratives of practice developed in Chapter 3 and the multimedia Breakfast Club case presented in Chapter 4 illustrate the problem-solving and problem-setting aspects of *phronesis* at Adams. The section concludes with a consideration of the relation of practical wisdom to an overarching set of values, which is necessary to mark *phronesis* off from mere *metis*. In section 5.3, I follow-up on a suggestion from Allan Collins to begin to develop a seemingly paradoxical "epistemology of *phronesis*", pointing toward the more general characteristics of practice that guide the practical wisdom of Adams. While not an epistemology per se, this list of practical wisdom characteristics could serve as a starting-point for further research comparing the practices of Adams to those of other schools. Finally, in section 5.4, I discuss how the *phronesis* research method might be used as a diagnostic and as an evaluative tool for researchers and for practitioners, highlight several outstanding questions that would help address problems in the current study, and suggest avenues for future research.

5.1 *Phronesis* and *episteme* in research

In Chapter 2 we saw how efforts to understand instructional practice in schools often begin with either pronouncements about what ought to happen or aphoristic adages drawn from experience. A difficulty in understanding how pronouncements affect a school, or how adages can be used to change a school, is that it is impossible to change just one aspect of a school system — disturbing a system produces systemic changes. We cannot understand how an organization changes unless we understand it as a system. Further, if we follow the line of reasoning involved with the identification of *phronesis*, the local conditions that define each school system are different enough to warrant separate consideration. This is not to say that there is no generalization possible across schools, but it is to say that accessing and documenting the practical wisdom of school leadership

must include the local variations of the school environment as key aspects of the account. To understand the practical wisdom of school leadership, we must go beyond the identification of the generic resources or capacities of a system to delineating how the networks of people, artifacts and practices that make the school work.

This analysis of Adams school provides a clue for how to understand and to navigate the systemic resources of a school. The school's pervasive practice of collaboration, planning and iterative design revealed a intricate systemic interaction among resources, design processes, constraints, affordances and external goals. Pushing or changing one part of the system revealed unanticipated reactions in other parts of the system. For example, at Adams, increased district accountability standards both sparked and built upon pre-existent resources grounded in professional development artifacts (Breakfast Club, Teacher Talk, School Improvement Planning) and led to the design of an assessment artifact (Five-Week Assessments) to provide formative feedback. Looking at the development of artifacts by the school community opens a window onto the dynamism of leader interactions throughout the school, revealing the systemic interaction among people and resources and articulating a path through which pronouncements are received and how they issue in changes in practice.

This investigation has demonstrated that the kinds of questions asked of systemic, practical-wisdom centered research differ from those asked of a more traditional research model that seeks generalizable causes and effects. Contrary to Bourdieu's (1990) insistence on the essential opposition between theoretical and practical logics, this research suggests that there can exist a complementary relation between epistemic and phronetic research on practice. Whereas an epistemic research model asks us which conditions x, y, and z produce effects a, b and c across contexts, a phronetic model addresses the specific conditions that afford or constrain these effects in particular school, and, describes how the school

community develop and maintain these conditions. An epistemic model of assessing school change would provide an account of which factors effected which changes; a phronetic narrative of practice constructs an account of how the change happened by telling the story of how the resources of the school were marshaled in a design process shaped by a perceived design task. In this research, the identification of the relevant design task offers the critical insight into the systemic organization of the school Through considering the design process of key locally designed artifacts, researchers can re-trace how practitioners understand and implement design tasks. For example, the well-documented mandate for some schools to increase standardized test scores is understood by different school communities in different ways. Is the mandate for increased test scores understood as a matter of professional development? Of professional community? Of student training? How is the question framed as a design task, and how is it translated into a design process? Constructing narratives of *phronesis* can lead to a research method that can reveal these essential sense-making activities among school leaders, informing epistemic research on policy and implementation with portraits of how the work is done in good schools.

The research methods developed here reflects a "consultative epistemology" for practical wisdom, that is, an account of knowledge customized to particular situations rather than claims valued regardless of their context. In the course of their work, consultants make their living by customizing their knowledge to the idiosyncrasies of the particular situation. However, while consultants are interested primarily is reproducing the effects of their chosen techniques in the situation of practice, we contend that their diagnostic skills about how to make sense of a given situation itself offers an important insight into local practical wisdom. Phronetic research aims to take these "residual" insights seriously as a legitimate object of research (c.f. Halverson and Gomez, 2001) Phronetic research provides a level of coherence and analytical rigor to collecting this information

traditionally at best be described as case study, and at worst as anecdote. By capitalizing on the particularity of practice, phronetic research explains how the wisdom of practice is lost apart from the situation. In our research at Adams, the fact that the practices that work in urban middle schools might not work elsewhere should not count against either these practices or the research method. Rather, nuanced narratives of practice, shared with experienced practitioners from outside the local school, should be able to tease out relevant practices at an appropriate level of generality that can communicate the nature of the practice without getting lost in the local detail. Research on *phronesis* aims ultimately not at reproducing principles or techniques, but at providing rich opportunities for practitioners to reflect upon their practice. This pedagogical emphasis seeks to develop cases that have maximum applicability across contexts – while at the same time recognizing the radically limited range of these contexts. Knowledge appropriate for a given context might not be appropriate, or even valid, in other contexts. For example, as we have seen in the user testing study (Section 4.3.2.3) the way that Breakfast Clubs work in primary schools, where many teachers share subject matter responsibilities, may have limited potential to create professional community in middle and high schools where subject matter boundaries often dictate faculty interests. Still, the fact that Breakfast Club was a powerful catalyst to forming professional community would not be lost on interested practitioners at different levels of schools, and the methods used to implement Breakfast Club at Adams may be suggestive for these practitioners as well.

5.2 Characteristics of practical wisdom

The practical wisdom of instructional school leadership, as I have argued in Chapter 1, consists in the patterns of how leaders frame and solve instructional problems over time. The discussion in Chapter 1 determined that:

- *Phronesis* is the ability to select and to apply the appropriate art to achieve the appropriate end, and the ability to judge which ends and means are appropriate;

- *Phronesis* is disclosed in patterns of problem-setting and problem-solving over time;

- Leadership provides a special case of distributed *phronesis*: determining and enacting the good for a community; and

- *Phronesis* is tied to particulars and not epistemic – however, *phronesis* research can generate epistemic opportunities.

The methods developed in Chapter 2 argue that narratives grounded in valued, locally-designed artifacts offer a unique vantage into the patterns of problem-framing and solving in schools. The opportunities to participate in and observe collaborative design processes at Adams have provided some insight into the *phronesis* of leadership practice at Adams. In other work, we have used these data to reconstruct narratives of practice that capture the relevant aspects of the situation of leadership practice (Halverson and Zoltners, 2001), considered how the artifacts generated from the design help us to access collaborative design processes at Adams (Halverson and Gomez, in preparation), and reconstructed narratives to show how the practice of instructional leadership in science evolves over time (Spillane, Diamond, Walker, Halverson and Jita, 2001).

After developing three narratives of practice based on the Breakfast Club, the Five-Week Assessment, and the School Improvement Plan, I am now in a position to make some broader insights about the nature of practical wisdom at Adams. In Chapter 1 and 2 I claimed that *phronesis* could best be captured by a distributed approach to cognition, arguing that the patterns of leadership in an organization could not be well represented "in the heads" of the key practitioners alone. Accounts of practical wisdom require account of practice, and practice is

the interaction of actors with situations through and task and social networks. By taking locally designed artifacts as the sense-making tools of organizational culture, these cases succeed in showing how goals, values strategies and resources intertwine to become leadership practice. The development and implementation of these artifacts reveal practice through the things that practitioners have constructed. The cases also show how the tools worked together to mediate the social and organizational development of the practitioners in the school. For example, Breakfast Club and its spin-offs began with the intention of helping teachers use research in their practice, and ended up helping to produce an organizational culture built around collaborative sharing and design of practices. The Five-Week Assessment built on this collaborative design community by introducing relevant data to inform the design process; while the School Improvement Plan coordinated the various instructional efforts discussed in Breakfast Club and measured in the Five-Week Assessment. I do not want to give the impression that this integration was either seamless or ubiquitous. I do mean to suggest that the integration deepened over time as the same practitioners began to realize the deep interconnections between professional development, assessment and planning in the school community. We can access how these practices came to be integrated, and how they continue to evolve, through an examination of the artifacts the practices bring to life.

I would like reflect upon how several themes drawn from initial discussion of *phronesis* look after the cases have been developed. Some of the insights that follow draw upon analytic points already made in the preceding narratives, while others use the narratives together to offer themes that emerge across the cases. The section opens by developing several themes that emerged in the analysis of problem-setting (5.2.1) and problem-solving (5.2.2) across the cases. This section concludes (5.3.3) with a consideration how the practical wisdom of school

leadership at Adams is related to higher values that differentiate *phronesis* from *metis* in practice.

5.2.1 Problem-setting, or apperception

Chapter 1 argued that a key element in the problem-framing stage of *phronesis* is apperception, or seeing a novel situation *as* a member of a certain class. The narratives of practice constructed here provide several interesting examples of the apperception of Adams' school leaders in action. Here I will consider several of the themes that emerged across the cases with respect to how Adams school leaders saw the problems with which they were faced. These themes include:

- Focusing on professional community through collaborative design as a path to school improvement;
- School administrators play a large role in the problem-recognition process, and faculty collaboration played a large role in the solution-design process;
- Recognize a strong link between professional community, collaborative design and student test performance;
- Commitment to respect the ongoing instructional priorities of the school when considering external partnerships to maintain program coherence; and
- Seeing externally-imposed constraints, such as district testing policies, as an opportunity for building professional community through collaborative design.

Considering the focus on collaborative design as a lens for understanding *phronesis*, it might not be a surprise to report that the Adams school leaders see many emergent problems as opportunities for collaboration among the staff. However, this *focus on collaboration as a path to school improvement* seems rooted in the Adams community prior to our research efforts. For example, Principal Williams' comments how she saw her initial challenges at Adams in

terms of developing collaboration among the faculty. The separation of the Primary (k-3) and Main (4-8) buildings at Adams had resulted in the development of two distinct communities of teachers:

> The perception in the primary building was they used to call it the country club, because the teachers in this building did not feel that the teachers in that building worked over there, because it was so difficult in this building because kids were older, and you had different issues. …One of the things that we did initially was a program called Bridging The Gap, which was more like a team building…. I asked for volunteers who wanted to serve on the leadership team for this purpose (032299).

The initial Bridge-the-Gap effort seemed to provide a prototype for subsequent problem apperceptions at Adams. In each narrative of practice, school leaders recognized a problem as an occasion for collaborative design. The apperception of Breakfast Club seemed rooted in the experience of prior, ineffective professional development models. Adams school leaders seemed to see the pressing need for professional development in language arts *as* an opportunity to create a forum that would bring teachers together to experiment with and to discuss new research-based practices. Helping teachers to not only read about, but to use and discuss the new practices would create instructional ownership and would encourage teachers to see themselves as professionals with valuable expertise to share. Language Arts Coordinator Tracy noted that:

> After we read the research, there were teachers who wanted to try whatever we were reading about. They became experts, and they became teacher leaders as they reported back on what they found interesting in their classrooms (090800).

The collaborative design of the Five-Week Assessment involved a similar lesson about ownership. The program, as initially designed by Tracy and Richards, did

not have much of an effect on instructional practices. Teachers seemed to see it as just another assessment that was not relevant to their instructional practices. As more teachers attended the subsequent design sessions, however, Tracy and Richards emphasized how these assessments would help children perform better on the summative exams. Over time, a number of teachers bought in to how the Five-Week Assessment would help them to realize existing assessment obligations. Unlike in Breakfast Club, where teachers select many of the discussion readings, most of the substantive test choices in the Five-Week Assessments in Language Arts were made by the Language Coordinator. While the collaborative design process of the Five-Week Assessment did result in the refinement of some exams, the process seemed to be conducted for the purpose of creating ownership rather than substantive design. The SIP seemed to have a balance between ownership and substantive design contributions. While administrators seemed to believe that SIP participation is important for teachers to get their programs on the instructional agenda, there were many examples, especially in math, of how teachers contributed substantively to the design of the instructional program.

Thus in each narrative, we can see how school leaders seek to direct the instructional agenda through invited participation in collaborative design. In a conference presentation, Williams commented that school people often perceive a contrast between strong principal leadership and a strong faculty (042501) In practice, Williams seems to establish both strengths at Adams not by relinquishing her role as an agenda-setter, but by inviting participation in the problem-setting process. This practice is another example of apperception at Adams: *while school administrators play a large role in the problem-recognition process, and faculty collaboration played a large role in the solution-design process*. For the Breakfast Club, the Annenberg Design project, and the Middle School Science Curriculum Development efforts, as in Bridging the Gap., Williams would recognize that a

problem existed, and would then invite faculty and staff members to become part of the problem-solving process. In Breakfast Club, for example, Williams noted that, in language arts instruction, "we were working very hard, but not working very smart" (110399). Working smarter would mean "not reinventing the wheel" by experimenting with methods that had already been already been tested by researchers (110399). Together with Language Arts Coordinator Tracy, Williams intended Breakfast Club to provide a forum for teachers to review and use research in their teaching. The subsequent informal design process involved discussions with interested teachers about when, where and how the Breakfast Club meetings would take place.

Collaborative design was thus rooted in the initial Adams school-wide leadership efforts. However, in recent years, Adams school leaders began to *see a strong link between collaborative design and student test performance*. This apperception, forged through years of experience, linked professional development, collaborative design and instructional improvement as three facets of many instructional initiatives. For example, Williams noted that participating in University-designed and conducted courses for teachers seemed to improve student scores in math, but was not as helpful in language arts. She remarked that:

> We began to believe in the importance of professional community when we realized that, it wasn't taking classes, but that it was when teachers started talking about their teaching that the scores started improving (121599).

This led to increasing opportunities for teachers to engage in collaborative curricular design as an opportunity for them to talk with one another about their practice, which in turn helped the school leaders reframe their apperception of how to organize professional development opportunities. Instead of looking to bring external partners in from outside, the collaborative design efforts and discussion

forums such as Breakfast Club helped to create a group of teachers who felt they could step forward to lead professional development sessions. As one teacher remarked:

> The whole thing was fascinating – we found that a lot of new teachers
> that were there were not exposed to the whole idea of teachers teaching
> teachers. They were amazed, they were surprised to see that this happens
> all the time. We no longer have to bring in, pay exorbitant fees to bring
> in, when we have people on our staff that have researched it, and present
> what they know …(090600).

Seeing professional development as an occasion and an outcome of collaboration also extends, on some grades, to grade-level lesson planning among teachers.[1] This emergent reliance of teachers upon one another, in parallel with the Breakfast Club and the SIP collaborative processes, is shown in the on-going First Grade curriculum design process. Three members of the First Grade team have been teaching together for over ten years, and have come to take on advisory roles in different subject areas.   One first-grade teacher commented that:

> When we are thinking about what to do in science, we go to our science
> person here (gesturing towards Ms. J) and we ask for help. See, that's
> her strength. When we need some ideas on science, we go to Ms. J's

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[1] Our experience at Adams led us to believe that the level of collaboration among teachers varied considerably among the grade-levels. Although this has not yet been studied systematically at Adams, our initial insight is that the number of years a grade-level has been together, along with the degree of collegiality among grade-level teachers helps to determine the level of collaborative design. While we have documented occasions in which the first grade, third grade and middle school teachers have engaged in grade level collaborative design efforts, the second and fifth grades, on the other hand, seemed to experience a higher degree of turnover and we did not hear of or experience any collaboration among these teacher on instructional matters.   Current research in the Distributed Leadership project about the relation between subject-matter expertise, grade-level teachers and school leadership indicates that 2nd and 5th grade teachers continue to collaborate, but the topic of collaboration is more about how to divide subject-matter responsibilities than on building and sharing common instructional practices. (Jen Zoltners, personal communication)

room; when they need ideas for art, they come to me. We know each
others strengths and weaknesses. When we go to her (Ms. J) and ask for
ideas, that's fine, she helps us set it up. (031500).

While the narratives of practice developed above focus mainly on cross-school
collaboration, a focus on teachers at grade level may reveal another dimension of
on-going collaborative curriculum design.

The apperception of turning to colleagues for professional expertise was
bolstered by Williams' *commitment to respect the ongoing instructional priorities
of the school when considering external partnerships*. Determined to avoid
partnerships that would distract teachers from current instructional priorities,
Williams would only entertain external partnerships that would contribute to on-
going instructional programs. For example, when approached by researchers in
search of teachers to participate in the Middle School Science Curriculum Design
process, Williams insisted on talking with her faculty members before committing
the school to the project. This agenda-setting power used to focus instructional
efforts on several key initiatives rather than developing a model of accepting
resources regardless of where they lead the instructional program is a key feature
of the how apperception helps to frame the problems faced in the school, and is a
key feature of the *phronesis* of Adams school leadership.

A final aspect of apperception in the Adams school community was the
characteristic of *seeing externally-imposed constraints, such as district testing
policies, as an opportunity for collaborative design*. In the case of the Five-Week
Assessment program, school leaders saw the summative data provided by the
district reports as a significant constraint on their ability to customize an
instructional program to help children succeed. (100400). In 1996, Williams

called a meeting of school leaders, including administrators and lead teachers, to figure out how to help resolve this issue.

> We discussed how we need to find out, school-wide, where children needed help in preparation for the upcoming tests. The Language Arts coordinator suggested a more frequent, school-designed assessment program to provide formative information to guide teachers efforts. Then the faculty and administrators designed the Five-Week Assessment program (021400).

To align the Five-Week exams with the standardized tests, several teachers, an Assistant Principal, and the Language Arts coordinator reverse engineered examples of the standardized tests to determine the appropriate skills needed by students (021400). Several teachers, led by the Language Arts Coordinator, then used instructional resources (including workbooks, texts and other instructional materials) to pull together tests appropriate for the tasks. As the assessment plan began to take shape, several members of the leadership team began to link the school literacy program with the assessment program as a way for teachers to find out how well they were teaching the literacy methods. Recently, school leaders began to modify the assessment program to address the expectations of new state-wide accountability measure (021400). While the Five-Week Assessment program provides an excellent example of how externally imposed mandates can be seen as opportunities for collaborative design, the SIP shows how external artifacts themselves can be used as occasions to create and deepen a sense of professional community in the school. Presented as an artifact that could (and often is) implemented independent of the main instructional practices of the school, school leaders at Adams used the SIP as an occasion to strengthen existing instructional collaborative design practices. Adams SIP process shows how an received artifact can be redesigned as a hub for sense-making practices in the school, as a central organizing tool for faculty, staff, parents, and the district to make sense of the

variety of instructional initiatives. In struggling to mediate the short-comings of district policy, the collaborative design efforts resulting in the Five-Week Assessment and the SIP serve to create ownership of the mandate as a legitimate constraint on the school community, while at the same time developing platforms for conversation about the advantages and disadvantages of the policy for the school community.

5.2.3 Patterns in problem–solving

The relation of *phronesis* to individual and institutional character requires us to look for practical wisdom in the patterns of problem-solving as they unfold over time. The narratives of practice constructed above point toward several interesting, on-going practices that serve as conditions for the possibility of artifact construction. In other words, the narratives suggest that certain practices prevail at Adams that make the successful collaborative design of instructional artifacts possible. Here I will highlight several themes that emerge across the cases with respect to the systematic development of problem-solving practices:

- The organizational infrastructure is built to accommodate instruction as a prime focus for the formal leaders of the school;
- Precedents for problem-setting and –solving are situated in prior designed artifacts and processes;
- The problem-space for design is progressively narrowed as a consequence of greater reliance upon prior design efforts; and
- How the school community understands and practices collaboration through the design of instructional artifacts.

One key practice establishes the pattern of taking instructional leadership issues seriously by *building the organizational infrastructure so that instruction can become a prime focus of the formal leaders of the school*. Principal Williams tells the story how her own educational focus changed during her doctoral studies:

because initially the thing (for me) was to be a good administrator, to be organized, to make your school run well, to run a tight ship. The focus now is the biggest story, before I became a principal I started a Doctoral Program … in administration, and my goal then w<u>as</u> to be move into administration. … I ended up finishing my degree not in administration but in curriculum and instruction. My philosophy had changed, … I now feel that a principal now has to be an instructional leader first (031501).

Her shift from administration to instructional leadership was subsequently reflected in how Adams became staffed. Principal Williams created several auxiliary staff positions, including a disciplinarian, two assistant principals, and a part-time business manager, to help take care of the disciplinary and managerial aspects of administration. She then sought out good teachers on the staff and offered them leadership opportunities to step up as instructional leaders in the school. With the advent of high-stakes accountability in the mid-1990s, Williams named one teacher (who has since moved on to a principalship in another school) to the position of Math and Science Coordinator, and brought in a former colleague to act as the Language Arts Coordinator in the school. Recently, Adams was named as a Math and Science Academy, which made it possible for Williams to appoint a former 6th grade science teacher to the role of Science Coordinator within the school. This configuration of administrative and instructional leadership positions, reflected in part by the SIP budgetary commitments, enables Williams, Tracy and Richards to devote a significant part of their time in the school to instructional leadership efforts. The press of leaders to attend to managerial tasks in schools, so often noted in school leadership research (e.g. Peterson, 1980; Cuban 1992), is thus alleviated at Adams, where discretionary funds are used for staff to handle many of the managerial tasks of school leadership. The decision to create administrative support positions resulted in unintended consequence a teacher/student ratio at Adams that is higher than the

district average.[2] Williams commitment to increased administrative staffing seems to have resulted in increased class sizes.

A striking consequence that emerges from this attention to instructional leadership practices at Adams is the degree to which *precedents for problem-setting and –solving are situated in prior, living designed artifacts and processes*. Rather than a static storehouse of resources on which leaders can draw, the narratives of practices show a dynamic system of interrelated artifacts, in which assessment, teaching, budgetary and curricular practices all form an integrated system of instructional practices. The SIP is a key example of this interrelation – as the core school planning document, the SIP process records and evaluates most of the on-going instructional efforts in the school   The SIP relies heavily on traditions of collaborative design and faculty problem-solving even as it reinforces and reshapes these practices. Continued attention to instructional improvement on the part of school leaders seems to keep these instructional artifacts in the foreground as living resources for the framing of subsequent problems. Further, the artifacts come to give their character to subsequent artifacts which seems to extend the capacity of the

originals. For example, initial artifacts such as the Bridging the Gap program, designed to help teachers from different grade levels talk together, have seemingly been used as prototypes for later artifacts that help teachers talk with one another about instruction and research (Breakfast Club), and helped community members design curriculum and assessment programs (Middle School Science, Five-Week Assessment). This generation of artifacts from predecessors provides many

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[2] In the 1997 School Report Card for Adams, the school ratio was 27.2 students in an average class compared to a district average of 25.9; in 1998 the difference increased with Adams at 27.5 and the district at 25.2. It would be interesting to investigate whether teachers accept the strategy of increasing administrative support at the expense of class size. The estimated ratio for the current school year (2001-02) at Adams is closer to 30:1 (Jen Zoltners, personal communication)

interesting opportunities for investigation. The evolution of such artifacts might be considered with the research methods developed by Richard Dawkins and his successors to study the evolution and transmission of ideas, or *memetics* (Dawkins, 1986; Aunger 2001). The importance of using prior artifacts as conditions for subsequent action may point toward why school leaders find it difficult to make rapid, substantive changes in school cultures. As well as acting on resources for change, existing instructional artifacts can act as brakes on change. New leaders need to understand the degree to which these artifacts pre-shape existing practices, and those in pursuit of significant instructional changes might instead follow a course of action that gradually builds upon and uses prior artifacts as resources rather than obstacles for change. Making visible this "implementing system" (McLaughlin, 1987) of how prior artifacts condition subsequent practice is a key aspect in clarifying the connection between *phronesis* and emergent instructional system characteristics.

Another interesting aspect of the *phronesis* of problem solving at Adams is how *the problem-space for design is progressively narrowed as a consequence of greater reliance upon prior design efforts*. In *Darwin's Dangerous Idea* (1995), Daniel Dennet quotes Piet Hein to illustrate the relation between wisdom and learning from experience:
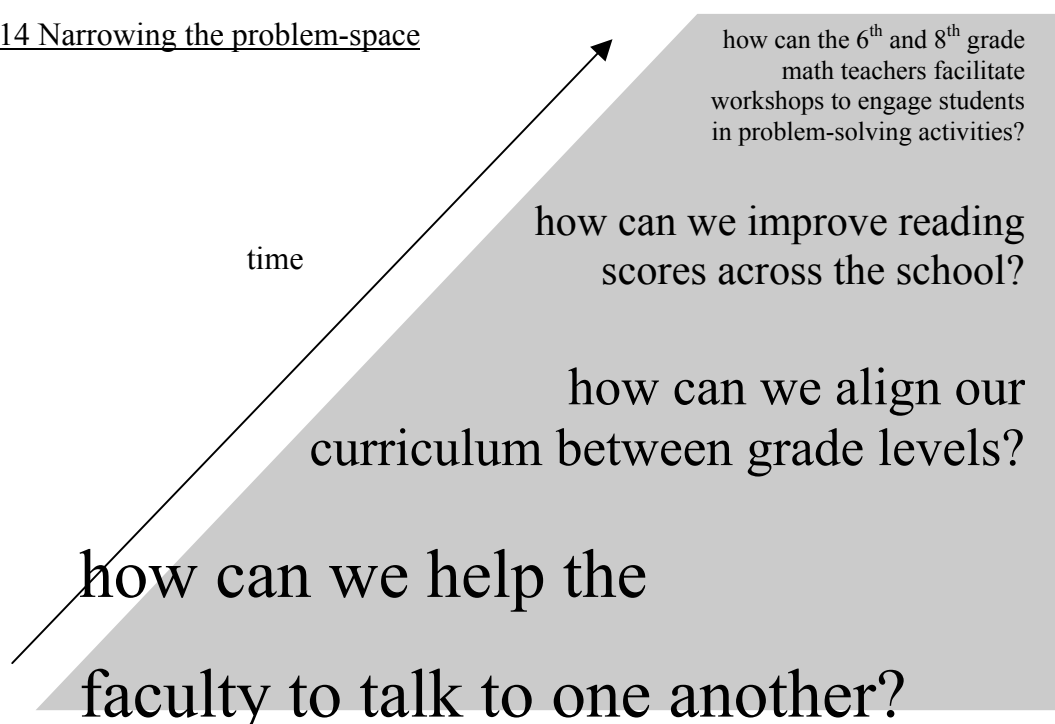
The road to wisdom?
Well, it's plain and simple to express:
Err and err and err again
But less and less and less (p. 200).

The results of prior design efforts give birth to possibilities for action that had not previously been recognized. In particular, these possibilities seemed at Adams as opportunities to refine the collaborative design process to achieve ever more specific goals. Once a general template of problem-solving practice has become institutionalized, subsequent efforts do not have to reinvent the entire wheel. Instead, subsequent problem-framing and solving efforts can focus on refinement rather than redesign, allowing practitioners to expend less cognitive processing on the aspects of the process they can assume, and more on the thorny issues involved in the particular implementation issue.

Fig. 14 Narrowing the problem-space

how can the 6th and 8th grade math teachers facilitate workshops to engage students in problem-solving activities?

time

how can we improve reading scores across the school?

how can we align our curriculum between grade levels?

how can we help the

faculty to talk to one another?

This narrowing of the question can be seen in efforts to develop professional community at Adams, where initial questions of "getting teachers to talk together" (from the Bridging the Gap program) has resulted in artifacts that are used as resources to ask current SIP questions such as "how can we get the 6th and 8th grade math teachers to lead discussions on the differences between the

ISAT and IGAP math problem-solving assessment patterns" (050800) (see Fig 13).[3]

One example of how artifacts are used to constrain subsequent problem-setting practices is the contrast between the emergence and use of Breakfast Club. Initially, Breakfast Club was designed to create an opportunity for teachers to talk with each other about research relevant to their practice (121500). However, when teachers began to grow comfortable with the Breakfast Club format, the Language Arts coordinator began to use the Breakfast Club agenda as a forum first to explore alternative language arts programs that would effectively integrate reading and writing into the Adams program, then to familiarize teachers with the language arts program (Four Blocks) that seemed to fit the needs of the Adams community (031699). Thus Breakfast Club, which originated as an end itself, came to act as a mediating artifact for subsequent conversations about instructional improvement. Further, it was clear in our work that the use of these artifacts did not end with the conclusion of their development. For example, the Five-Week Assessment program served as a valuable asset for identifying teachers and classrooms in need of further support. One teacher noted how "the problem in the 5th grade came out on a recent round of the 5 week assessment program. The 5th graders were not

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[3] In a personal communication, Jen Zoltners noted that this narrowing of the problem-space might simple be an effect of time, and worse, that the problem narrowed onto might be the wrong one. This seems to happen in many organizations with stable leadership positions. Increasingly irrelevant concerns come to carry more and more weight as the more pressing institutional issues fade in importance – leaders focus on the problems they can solve rather than the problems that appear intractable. (Think of urgent memos on coffee machine replenishment at the Illinois Department of Motor Vehicle office). I think Jen's comments highlight the need for a continuing iterative interaction between prior artifacts and traditions and current assessment standards – a balance which seems to be met in the context of the Adams school instructional program. On the other hand, observations of Adams teaching practice suggest the widespread prevalence of a very traditional direct instruction pedagogy across subject areas. Perhaps the narrowing of the problem space in terms of "problem-solving workshops" is a way for Adams leaders to provide instructional leadership while side-stepping the real challenges of changing long-standing classroom pedagogical practices.

doing very well on their science and reading comprehension" (021400).[4] As a result, the principal met with the 5th grade teachers to develop an instructional plan with one another. The teachers, together with the African American Heritage teacher, developed a pull-out program to enhance the inference skills of selected 5th grade students. From this example we can see how school leaders had drawn upon the information generated from the Five-Week Assessment program, with the flexibility built into the instructional staff, and designed a custom solution for an emergent problem. The regular references to key instructional artifacts in Adams' teachers and administrators descriptions of daily practice testifies to how the results of past design efforts at the school have folded into a rich systemic network of resources upon which the school community draws to frame and solve emergent issues. Thus the results of past collaboration come to serve as framework within which subsequent collaboration take place.

Finally, the narratives of practice *point to characteristics of how the Adams school community understands and practices collaboration*. As we have seen above, one characteristic of collaboration at Adams is the practice of restricting most faculty collaboration to the problem-solving phase. Formal school leaders, especially the principal, reserve much of the problem-setting power to themselves. The narratives revealed several other general themes of collaboration at Adams:

- *Collaboration is a means, not an end in itself*: Collaboration is seen as a way to involve the community in solving problems by helping members take ownership of the solutions. Collaboration serves as a vehicle for a problem-centered professional community – a way to surface problems as well as a method to design their solutions

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[4] This was in part because of health problems among the 5th grade teachers, at the time, two of the four classrooms were conducted by permanent substitutes, and in time another 5th grade teacher would go on medical leave.

- *Collaboration structures begin as invitations, and emerge as institutions*: When Williams first arrived at Adams, she understood that community could not be created by mandate - people interested in participating in collaborative planning efforts needed to come because they wanted to, not because they had to (032299). However, after a while it becomes clear to the faculty that the benefits of participating in the process outweigh the advantages of avoiding it. Vital information generated by the Five-Week Assessment program and distributed through Breakfast Club and Teacher Talk becomes integral to the everyday work of teachers. As one administrator described: "faculty members come to see that if they don't join in, they don't hear the news important to their work" (041400).

- *Collaboration issues in artifacts or decisions* – Some collaborative efforts, such as the design of Breakfast Club and the Five-Week Assessment program are organized to design structural solutions to chronic problems, while other collaborations aim toward decisions to resolve acute issues, such as student disciplinary incidents or conflict mediation. The two occasions for collaboration differ both in the spontaneity of initiation (planned vs. emergent) and in the duration of their results (long-term vs. short term).

The knowledge generated through this form of *phronesis* research – how to trace the webs of purpose, how to help actors articulate their plans and goals, how to construct schemas that elegantly display the interaction of resources, design and use of artifacts in schools — loses in generalizability and necessity what it gains in local depth. Phronetic narratives of practice, constructed in this manner, give us access to perspectives inside the practice system that brings the interrelationships of artifacts into clearer focus.

5.2.3 *Phronesis*, *metis* and the higher good

One aspect of this discussion of the *phronesis* of school leadership that has not received prominent attention is the relation of practical wisdom to ethical

values. Recent discussions of *phronesis* in social and critical theory draw attention toward the role of practical wisdom in moral and ethical discourse (e.g. Gadamer, 1989, Dunne, 1993, Habermas 1984, Lyotard and Thebaud, 1985). These thinkers are drawn to the concept of *phronesis* as a way to consider moral action while side-stepping the sensitive issue of the existence of objective moral principles. Lyotard and Thebaud (1985), for example, uses *phronesis* to highlight the moral activities of diagnosis and prescription without recourse to a transcendent moral framework. According to Lyotard and Thebaud, *phronesis*

> …consists in dispensing justice without models. It is not possible to produce a learned discourse upon what justice is…When one says: in every instance, choose the mean, it means, for Aristotle, that his mean cannot be determined in itself, that is, outside of the situation in which we find it (Lyotard and Thebaud, 26-27).

For Aristotle, ethical deliberation aims at acting according to the mean between possible extremes of action. Lyotard and Thebaud holds that the activity guided by *phronesis* determines, rather than uncovers, this mean in the absence of a legitimate transcendent moral framework. Gallagher (1993) claims that Lyotard and Thebaud's version of *phronesis* misunderstands the moral world-view in which Aristotelian *phronesis* is situated. Gallagher reminds us that

> *Phronesis*, according to Aristotle, requires an education, a knowledge of particulars which comes from experience -- and this includes understanding (which involves learning) and good sense. *Phronesis* also requires virtue; the person who wants *phronesis* must develop the right habits, an ethos developed over time. This formation of the right ethos in experience -- I call this the educational backdrop of *phronesis* -- is precisely what Lyotard and Thebaud denies. In effect, Lyotard and Thebaud would hold that the person with *phronesis* plays a good game --

a just game -- quickly without preparation, and only in the immediacy of the paralogical situation (23).

Gallagher claims that Lyotard and Thebaud's reading equates *phronesis* with *metis*, and allows us to overlook the context of action that makes ethical action meaningful both to actors and to others. Aristotle is clear (NE 1141b-1142a) that the difference between *phronesis* and cleverness is that *phronesis* is guided by a higher, coherent sense of the good, while cleverness is a mercenary value that serves whatever value currently in vogue. Many critical theorists contend whether this "higher good," the appropriate context for ethical action, can deliver on the promise of a monolithic sense of meaning for ethical discourse. For Aristotle and the contemporary Greeks, this transcendent moral universe, or *kosmos*, formed a taken-for-granted backdrop for moral action, and was realized through culture and education in the form of virtue and civic order. The cultivation of character was the replication of this external order in the soul, making the individual a microcosm of the whole. Without a coherent sense of the macrocosm, however, it is difficult to recreate a personal microcosm. It is precisely the existence and legitimacy of this cosmic "metanarrative" that is at issue for thinkers such as Lyotard and Habermas, who, in the aftermath of Nietzsche, develop different forums to re- (and de-) construct the possibility of ethical discourse absent an ethical universe.

The post-modern discourse uses *phronesis* to indicate to a way of thinking about moral action. *Phronesis* allows us, with Lyotard and Thebaud, to consider moral action without recourse to a transcendent moral context, or, with Habermas, to consider how communication comes to constitute the context for moral action. In both uses, the contended existence of a legitimate backdrop for moral action looms behind the argument. The research developed here, however, takes a different approach to *phronesis*. Instead of assuming the existence, or non-existence, or an overarching moral context, the conception presented here can be

used to investigate whether (or how) practitioners display a coherent moral perspective in their work. Chapter 2 discussed *phronesis* can be operationalized to inform a social science research method aimed at documenting practice. As a result of the triangulated perspective that opens through the development of narrative construction around multiple artifacts, researchers can open a window on the moral assumptions that inform practice as well as on the practice itself. Although the documentation of the relation between practical wisdom and moral perspective was not the primary emphasis of this research, the data resulting from artifact documentation and representation point toward a way in which the *phronesis* framework might be used to investigate the moral perspectives that inform leadership practice. I have argued above (Section 1.1.5) that unless practical wisdom is guided by a sense of a higher good, it degenerates into *metis*. An aspect of this relation between *phronesis* and *metis* has been captured in the leadership and management literature as the contrast between transformational and transactional leadership (Burns, 1978), and as the contrast between leadership and management (Cuban, 1994) Documenting multiple artifact development and implementation cycles in a single school may give us a unique perspective to investigate the degree to which practitioner theories-in-use are grounded in a coherent moral vision or reflect a value-neutral problem-solving perspective. While the resultant profiles of moral perspectives in a school may not replace the discussion of the grand metanarratives of interest to post-modern thinkers, they may help generate some interesting empirical data about how values inform action in local contexts.

As I mentioned above, documenting the moral perspective of the leadership practice at Adams was not the primary purpose of this research. Still, in order to develop a full profile of the *phronesis* of school leadership, I should at least indicate the initial findings about the moral perspective that influences everyday work at Adams. In reflecting upon the data gathered in assembling the Adams

case, several themes emerge to characterize the moral perspective that seemed to apply across the narratives developed in Chapter 3. Any consideration of the values that inform practice at Adams must take the following two value-laden issues into consideration:

- Instructing children and educating the whole child;
- Establishing a Christian community in the school.

Instructing children and educating the whole child. The school community at Adams recognizes education of their children as a primary focus of the school program. While this may seem obvious to audiences outside the school, schools are workplaces for their adults and are often overrun with the conflicts and power struggles that come with workplace situations, diverting attention from teaching and learning to professional and personal struggles. As a symbol of the school commitment to learning and assessment, Principal Williams, Assistant Principal Richards, and Language Coordinator Tracy led an initiative to post the message " are children learning? How do we know?" in every classroom. The focus of the assessment-professional development-school planning process is not conducted only to enhance the school status in the district. As discussed in Chapter 3, when asked about whether the school community was guilty of "teaching to the test", Williams contended that:

> Yes we have to make certain district standards, we have to meet certain state standards, but since we are in the business of educating children, our children are making progress academically. So everything that we do is based on the fact that we are here to insure that our children are learning and for no other reason. That's why we are here, that's why we are being paid, and everything we do is for that reason (121900).

While Williams points out the necessity of educating children while meeting state standards, Assistant Principal Richards added that, especially in the Middle School program, there was a more articulated concern for educating the whole child:

And then too its not a one sided kind of affair where we just focus on academics, or nurturing and caring, and that's it. We try to focus on the whole child and provide all of those needs, the social, emotional and academic and physical, and try to be a nurturing, caring and provide the educational needs that the children need as well. All of those things together have really made a difference with us (121900).

These concerns with educating and caring for children while meeting external accountability standards lead toward an interesting opportunity to examine how seemingly conflicting values can co-exist in practice. Over the course of our research at Adams, several teachers have commented off-the-record about how the emphasis on testing and performance directs attention away from caring for children and toward school performance. The artifacts examined in Chapter 3 all point toward how the school works toe coordinate and meet external performance standards. Documenting the artifacts that promote student well-being, such as Career Day and Real Men Read (as described in Section 3.1) and contrasting the practice with the school improvement artifacts would provide an interesting glimpse into how this apparent value conflict plays out in leadership practice.

Establishing a Christian community in the school. One of the remarkable features of the Adams community was the pervasiveness of a Christian spirituality atmosphere in formal and informal school gatherings. For example, the Adams school gospel choir leads the student body in overtly Christian hymns at school gatherings such as Career Day, Graduation, and Spirit Days. Seven members of the school formal and informal leadership team, including both assistant principals, serve as clergy members in a variety of Christian churches. When asked about the pervasiveness of the seemingly shared religious ethic, Williams remarked that:

> I think in African American schools in particular the church has really
> been a stronghold, so we can probably do things, the kids do this on
> Sundays, so its common to them. The Church has really been an anchor
> in African American history. For us, its more a sense of pride, the stories
> of African Americans are often told through song, in many cases if the
> slaves weren't taught to read or write, they could tell their stories through
> song (121900).

Williams' leadership practice seemed to rely upon this shared religious heritage as
a resource to unite the community at Adams.   The shared past experience, tangled
up with church practice, forms a common touchstone of values for the community:

> My family came from the south, in southern communities the church was
> the anchor. Even if people did unsavory things during the week,
> everyone was in church on Sunday, everyone went to Church. My
> grandmother wasn't a good reader or writer, but she could tell stories, she
> could sing songs, and we felt that we didn't capture our own family
> history because we didn't videotape her enough to get that history. The
> parents (here) love it, in May we have a tremendous Gospel choir concert,
> and you cannot find a seat. We have to have two shows (121901).

This sense of common religious heritage informs the mission teachers feel toward
students. Assistant Principal Richards, a church pastor, described how her calling
informs her role in the school community. She envisions the Adams community as
a family for many of the children, providing support and care that many do not
receive in their homes. The role she plays as a leader of her congregation is
reflected in the role she has established for herself at Adams. Despite the number
of religious leaders among the faculty, the research team at Adams documented
little evidence of proselytizing by the teachers to the students or to each other. The
values which inform church services, song, discipline and hard work, come across
as values that inform the school community without the overt references to

religiosity that often accompany such activities. I have had similar experiences of the close association of religious and school leadership in several other primarily African-American led and attended schools in the Chicago area. Although the artifacts investigated here did not directly uncover the spiritual commitments of the Adams school leadership, it is likely that a research effort designed to document the religious convictions of school leaders could use artifact-based research on practice to uncover relevant patterns.

A challenge of *phronesis* research to investigate the moral commitments of school leaders would be to determine the level of coherence in value systems displayed across artifact development and implementation. Widely disparate value systems across artifacts, such as a commitment to teacher empowerment in one program, student ownership in a second, and compliance with district mandates in another may indicate a lack of coherent moral vision, and a desire to implement a variety of programs rather than an according to a commitment to core instructional values. It may , of course, also indicate that there is a deeper managerial vision that focuses on the perception of wide-scale participation in district initiatives at the expense of program coherence. In the Aristotelian sense, political *phronesis* is exercised to benefit the good of the community. In schools, practices that commit to values that do not ultimately benefit children do not qualify as *phronesis*, and must be considered as forms of *metis* in which power is used to support practices that do not ultimately benefit the good of the students. These initial, and admittedly superficial, observations about moral coherence and integrity would benefit greatly from a more detailed documentation of the value assumptions built into the artifacts considered important by school communities. Determining the relation of *phronesis* to *metis*, relatively clear in the abstract, becomes muddy in practice – and the *phronesis* framework developed here may point toward a method to disentangle leadership from managerial practices in instructional leadership.

5.3 An epistemology of *phronesis*?

  The contrast between *phronesis* and *episteme* outlined in Chapter 1 would seem to suggest that an epistemology of *phronesis* is a contradiction in terms. How can we generate cross-case principles of a form of knowledge that depends upon case-characteristics for its articulation? Rather than considering *phronesis* and *episteme* as opposed to one another, however, it may be more helpful to think of their relation in terms of mining. *Phronesis* research is like digging a mine into a particular case, investigating how the systemic interactions of practice unfold over time in a particular setting. Once the mine is completed, however, new perspectives may be uncovered from within the case to generate epistemic generalizations that can subsequently be used to inform the narrative construction of other phronetic investigations. We have already seen, in the LCSL case, how design principles developed for the Breakfast Club case might be used to structure other cases. Allan Collins suggested that there might be similar, content-based principles that might be drawn from the Adams case that could be for contrasting and comparing to similar cases. While not exactly an epistemology of *phronesis*, the following principles might be used to characterize an "epistemology" of instructional leadership practice at Adams:

- *Teacher co-design*. Involve teachers in the design of improvement strategies.
- *Motivation model*. Draw teachers into participation by making the strategy appealing to want to join.
- *Sharing practices*. Develop ways for teachers to share their expertise with other teachers, thereby gaining visibility for their talents.
- *Instruction-based professional community*. Find ways for teachers to talk together about the goals of the school.
- *Resource acquisition and allocation*. Provide resources for teachers to carry through the ideas that might impact the school's goals.

- *Systematic internal and external assessment practice*. Monitor how well strategies are working so that midcourse correction is possible.

- *Responsiveness*. Tightly couple the strategies implemented to the demand and expectations of the outside world.

5.4 Applications of *phronesis* research

While narratives that document practice reduce the noise of complex leadership situations, allowing the sense of the practice to emerge, they also bring into focus opportunities for further epistemic research (c.f. Bruner, 1986; Section 2.2 above) focused on the internal questions of practice. For example, the following opportunities to conduct paradigmatic research arise in our efforts to use Breakfast Club as a way to make the leadership practice at Adams intelligible to interested others:

1   Considering how artifacts reflect practice is a two-edged sword – their visibility and accessibility makes them easy to interrogate, but also reflect how difficult it is to isolate organizational processes. How can we determine whether these artifacts are a causes or an effects of on-going efforts to develop professional community at the school? Should such artifacts be seen as features of a rising tide of professional community, or as catalysts for the development of professional communiy?

2   In the reflective interview process, Dr. Williams stated that "it was only when teachers began to talk with one another about their teaching that the test scores started to rise" (121599). How much weight can the connection to professional community bear, and what kinds of data would provide appropriate evidence for the connection?

3   In a related question, the Adams instructional artifacts clearly affect professional community among adults, but how do they affect the ways in which teachers interact with their students? If student test scores have gone

up as a result of programs like these, what has been the effects on student-student and student-teacher engagement?

4   The narratives presented here largely omit the voice of the dissenting teachers who choose not to participate, or who disagree with, the instructional goals of the program. While we have some interview and observation data on several dissenting teachers, we need to understand how disparate voices are co-opted, marginalized or integrated into the school community.

5   Breakfast Club, the Five-Week Assessment and the SIP have largely focused on language arts research and practice. As we have seen in Section 3.5.5.4, recent changes in state-wide accountability measures have imposed another exam on which Adams students do comparably well in language arts, but do much poorly in mathematics. How/Will the subject-matter specificity of Breakfast Club, and the resultant professional community around language arts practice, influence instructional leadership efforts to frame and address the challenge faced by the math program?

Many efforts at school change focused on the *what* of change begin with pronouncements, are received issue the black box of practice, and (hopefully) issue forth in measurable changes in performance. Consequently, there is big business in both pronouncement-making and in evaluation, but still an aura of mystery around practice. This may be because it is (relatively) easy to fashion pronouncements and to measure results, while very complicated to untangle the particular systemic dynamics that marginalize or capitalize on particular innovations. One difficulty in understanding how pronouncements affect a system is that it is impossible to change just one aspect of a system — disturbing a system produces systemic changes. We cannot understand how an organization changes unless we understand it as a system. We must go beyond the identification of resources or capacities to delineating the relationship among

element and the networks that tap into significant resources. Our initial analysis at Adams provides a clue for how to understand and to navigate the systemic resources of a school. The school's model of collaboration revealed a intricate systemic interaction among resources, design processes, constraints, affordances and external goals. For example, increased district accountability standards both sparked and built upon pre-existent resources grounded in professional development efforts (Breakfast Club, Teacher Talk, School Improvement Planning) and led to the design of artifacts (five-week assessments) to provide formative feedback. Looking at the development of artifacts by the school community opens a window onto the dynamism of faculty interactions and the tenor of conversation throughout the school, revealing the systemic interaction among people and resources and articulating a path through which pronouncements are received and how they issue in changes in practice.

The Distributed Leadership framework points toward ways that the situation of practice can come to constitute leadership practice in schools (c.f. Spillane, Halverson and Diamond, 2001). The design and use of artifacts is a key aspect of this constitutive practice, showing not only how the context shapes leadership practice, but also how leaders can shape their contexts. This bi-directional constitutive process is well-captured by the principled development of narrative reconstructions of practice. Constructing narratives of complex instructional leadership practices gives us insight into how practitioners make sense of their practice, and sheds light on how valued aspects of the leadership situation were designed into the key artifacts of instructional leadership. This light can point the way for both researchers and practitioners alike to investigate strategies for how to create the conditions for the possibility of good teaching and learning in schools.

The *phronesis* connected with tracing the problem-solving and setting is related to experience. Aristotle claims that experience, the accumulation of encounters with particular situations, is a key aspect of practical wisdom (NE

1142a27; 1143b8) Experience enables a person to recognize how principles play out in the course of life, and to anticipate and endure the obstacles that emerge. Experience is different from mere endurance, however, and an wisdom depends upon the ability to learn from experience. The attention paid by Adams school leaders to instructional issues helps to keep alive the lessons of prior design experience, constraining the subsequent problem-spaces and making each emergent set of problems more accessible than the last. Seeing how experience constrains the problem-space is a key manifestation of practical wisdom. Well-constructed narratives of practice can give us hope that, if constructed on the right level, they will be intelligible to practitioners interested in conducting similar practices in their own schools. In the case of Breakfast Club, the Five-Week Assessment, and the School Improvement Plan, we have identified simple, potentially replicable locally-designed artifacts that have had profound implications on the Adams school community. At Adams, these has helped to establish and solidify, in the mind of administrators and teachers alike, the link between professional community, assessment, planning and instructional improvement. These narratives have attempted not only to draw out these assumptions, but to provide some insight as to how they hang together in the context of instructional leadership practices at Adams.

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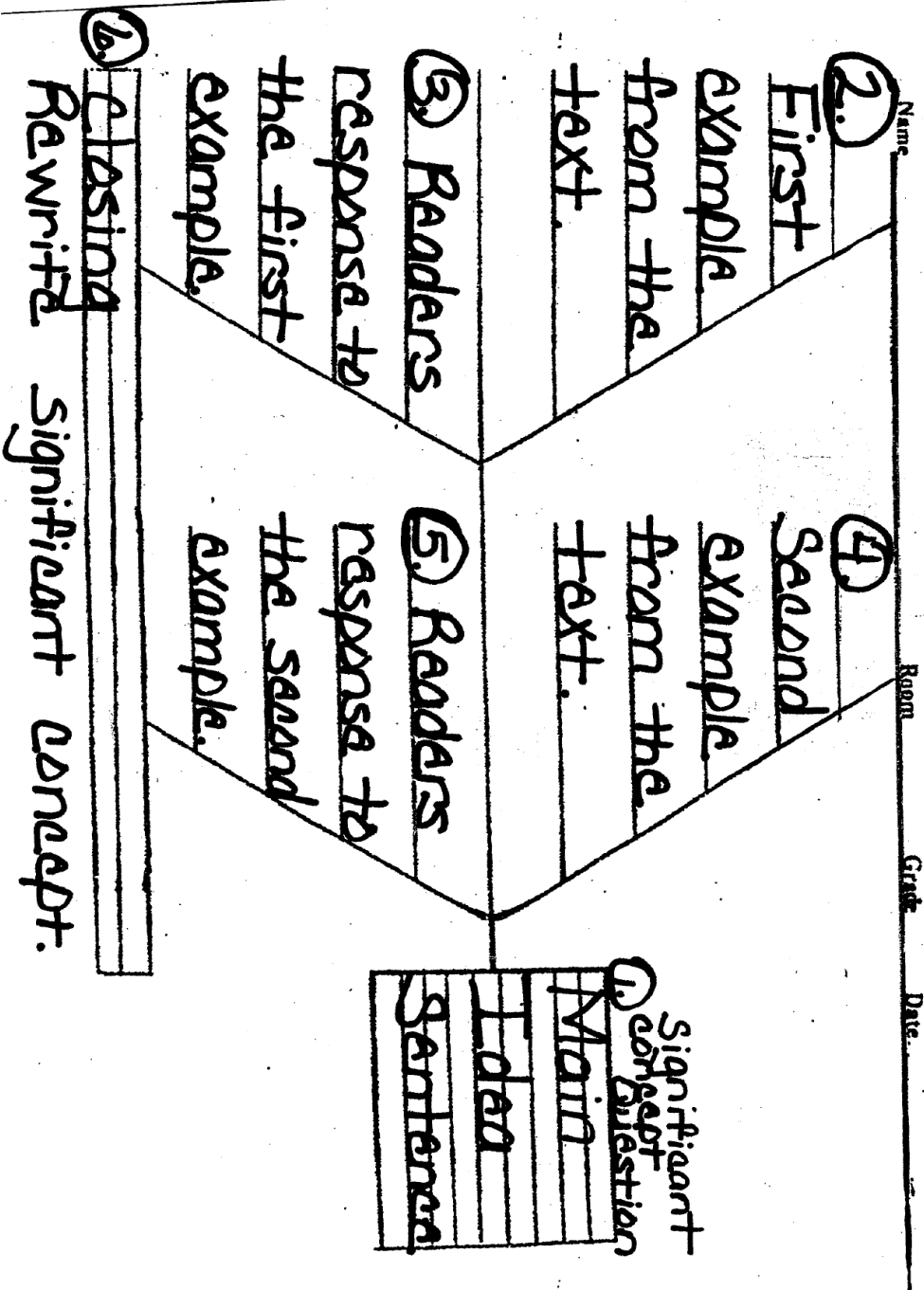
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Appendix 1 Fishbone Model

Fish Bone Model

Name ___ Room ___ Grade ___ Date ___

2. First example from the text

3. Readers response to the first example.

6. Closing Rewrite Significant concept.

4. Second example from the text.

5. Readers response to the second example.

1. Significant concept Question

Main Idea Sentence

Appendix 2   1999-2000 SIP Executive Summary

EXECUTIVE SUMMARY

SCHOOL: J   M   C   Elementary

UNIT #:   4

REGION :   \

VISION-MISSION-PHILOSOPHY HIGHLIGHTS

The James McCosh School community is dedicated to providing a comprehensive educational program for our s   levelopmental needs of the whole child. This will be accomplished through quality educational experiences, professional development opportunities, fostering a sense of community whereby parents are involved and committed to participating in their children's education, and providing a caring environment to nurture our students. In addition, students will be provided with learning experiences that will enable them to develop into responsible citizens.

PRIORITY GOALS

1.) Improvement of reading/language arts instruction to increase student achievement by at least 3%.

2.) Improvement of mathematics instruction to increase student achievement by at least 3%.

3.) Increase parent/community involvement.

BUDGET ALLOCATIONS (only list allocations and fund sources that support the priority goals)

* Professional Development   4,047
  Conferences (Reading/Lang.
  Arts Improvement & Math)
* Substitutes - Workshops,   10,000
  Conferences, Collaborative
  Planning
* Staff for supplemental   428,121
  Reading/Math Initiatives

* Extended Day Salaries   49,288
  Remedial Program
* Extended Day Salaries   10,000
  `Professional Development
* Supplies, Materials   186,000
* Textbooks   32,500
* Equipment   69,300
* Parent/Grandparent   26,000
  Workshops

Appendix 3   1999-2000 SIP Cover page

1999-2000
SCHOOL IMPROVEMENT PLAN FOR ADVANCING ACADEMIC ACHIEVEMENT

PRESENTED BY

JAMES MCCOSH

UNIT   4740   REGION   V

ATTACHED TO THIS PLAN ARE THE FOLLOWING:

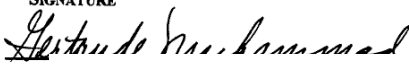|			
X	STATE CHAPTER 1 PLAN	X	EISENHOWER PLAN
X	IASA CHAPTER 1 PLAN	X	BLOCK GRANT (SENATE 730) PLAN
X	SAFE AND DRUG FREE PLAN	X	LUMP SUM BUDGET (printed by "fund")

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Rhonda Allen	Burma Hill	Gertrude Muhammad
Claretha Anthony	Grethel Hogg	Willanne Murdock
Cheryl Armstrong	Mary Hoover	Julianne O'Gara
Dianne Bernard	Lashon Hoyle-Graham	Mary Rodgers

SIGNATURE

O	NO VOTES
O	ABSTENTIONS
3	ABSENT MEMBERS
1	VACANCIES
11	TOTAL (11/ELEM; 12/HIGH

SIGNATURE

Gertrude Muhammad   LSC CHAIR

SIC

APPROVED: PROBATION MGR.

SIGNATURE

Appendix 4   1999-2000 SIP Vision Statement

SECTION 1   VISION AND ACCOMPLISHMENTS

VISION-MISSION-PHILOSOPHY

The   School community is dedicated to providing a comprehensive educational program for our students focusing on the developmental needs of the whole child. This will be accomplished through quality educational experiences, professional development opportunities, fostering a sense of community whereby parents are involved and committed to participating in their children's education, and providing a caring environment to nurture our students. In addition, students will be provided with structured learning experiences that will enable them to develop into responsible citizens.

ACCOMPLISHMENTS

School was recognized by the Accountability Council as a "Level A School" based on continuous, outstanding progress on the ITBS in reading and math. Reading achievement on the ITBS improved by 7%; mathematics achievement improved by 9%. IGAP reading scores improved at the sixth grade level. Writing and mathematics scores were outstanding. At least 94% of the students met or exceeded state standards in writing. In addition, 91% of third graders, 85% of sixth graders, and 76% of eighth graders met or exceeded standards.

Other noteworthy accomplishments include:
- ** establishment of the "Four Blocks" model for literacy schoolwide
- ** extensive professional development through Teacher Leader, Breakfast Club, Teacher Talk, and Mathematic Improvement Workshops
- ** receipt of a CSRD grant to support literacy and mathematics improvement
- ** continuation of the CSI initiatives
- ** expansion of the University of Chicago's SESAME program
- ** increased technology usage through partnerships with Northwestern University and the University of Chicago
- ** enhanced partnership with the Chicago Communities in Schools

Appendix 5   1999-2000 SIP Analysis of Current Conditions (Sample Page)

SECTION 2   ANALYSIS OF CURRENT CONDITIONS

SUPPORT AREA: QUALITY INSTRUCTION PROGRAM-READING/LANGUAGE ARTS

FOCUS OF ANALYSIS	WHAT IS WORKING	WHAT NEEDS WORK
Literacy Program (Four Blocks)	► Pat Cunningham's model of the Four Blocks of Instruction	► Adjustments in time management ► Additional materials that will help with organizing and managing (i.e.-zip lock bags, sentence strips) ► Additional time for teachers to meet after school for curriculum development ► Teacher strategies on the jigsaw method, literature circles, questioning techniques, writing standards at grade levels, teacher conferencing, partner reading and teaching special needs students
Writing	► Teacher modeling ► Using predictable charts in kdg. ► Group writing activities (collaborative writing) ► Graphic organizers as a pre-writing activity-grades 2 & 3 ► Power writing - PreK-3	► Balancing power writing with other writing programs ► Consistency across grade levels ► Need for specific writing standards for each grade level

Appendix 6   1999-2000 SIP Goals, Work Plans and Budget (Sample Page)

SECTION 3   GOALS, WORK PLANS, MONITORING, AND BUDGET

PRIORITY GOAL #1: IMPROVEMENT OF READING/LANGUAGE ARTS INSTRUCTION TO INCREASE STUDENT ACHIEVEMENT BY AT LEAST 3%

WORK PLAN ACTIONS RELATED TO PRIORITY GOAL	IMPLEMENTATION DATES	MONITORING ACTIVITIES	TARGET DATES	BUDGET/FUND	INTENDED USE
Continuation of five week assessments in reading and writing (Reading Resource Teacher/Middle SchoolCoordinator)	On-going	Progress reports - Administration of five week assessments related to learning outcome	On-going	$1,000/IASA $87,000/State	Supplies Reading Resource Teacher, Teacher Assistant
Provide substitutes for teacher attendance at conferences and local consultation sessions on five week assessment results and student intervention needs school wide	On-going	Provision of substitutes as needed	On-going	$10,000/IASA	Teacher Substitutes
Continue to integrate curriculum in informal and five week assessments	On-going	Identify subjects that are integrated into assessments - Completion of curriculum units	On-going		
Continue Language Arts Fair as a performance assessment that tests integration of curriculum	May 2000	View four projects and judge them based on level of curriculum integration	May 2000	$1,000/IASA	Supplies
Continue "Real Men Read" program (K-8)	May 2000	Attendance by men invited	May 1999		