

Helping Teachers Learn: Principals as Professional Development Leaders

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Through qualitative interviews and document analysis, this nationwide study investigated how 25 principals from a sample of public, Catholic, and independent schools with varying financial resources understand the practices they use to support teacher learning. This Spencer grant-funded research illuminates how these leaders understand the challenges (e.g., financial, human) they face in supporting teacher learning and highlights their creative responses to challenges. This paper describes (1) four broad initiatives principals employ to support teacher learning and (2) the developmental principles underlying the practices. This investigation offers insight into another way to accomplish important national goals, illuminates robust practices that can support adults with different learning needs, preferences, and developmental orientations, and points toward a different, learning-oriented way of conceptualizing and exercising leadership in support of teacher development.

INTRODUCTION

School leaders today have enormous responsibilities as they strive to lead effectively in the context of multifaceted educational challenges. Teacher shortages, teacher turnover, standards-based reform, accountability, and an increasingly diverse population are among the many challenges principals currently face. Furthermore, just as the work of schools, school systems and school leaders are becoming increasingly complex, America faces an anticipated shortage of experienced principals (Ackerman & Maslin-Ostrowski, 2002; Kelley & Peterson, 2002; Wagner, Kegan, Lahey, Lemons, Garnier, Helsing, Howell, & Rasmussen, 2006). Principals are being asked to adapt from managing instructional leadership, scheduling, budgeting, and other responsibilities to being primary adult developers and architects of collaborative learning communities. They must take on diverse roles, and support themselves and teachers with differing needs, developmental orientations, levels of experience, and preferences to retain and support teachers under conditions of standards-based reform and increased accountability. They must prepare and help teachers prepare K-12 students to prosper in a “global knowledge economy”

(Kegan, as cited in Carroll, 2006, p.1). Yet, many principals are not equipped or supported to meet these challenges (Elmore, 2004; Wagner et al., 2006) and more are leaving their posts because of the stress and complicated nature of their work (Klempen & Richetti, 2001; Murphy, 2006; Sparks, 2004). The demands of leading in the twenty-first century require important changes across all levels of the school and district (Wagner et al., 2006). There is a pressing need to support principals in addressing these challenges so that they can cultivate schools to be learning centers. These learning centers must be places in which all adults and children are supported to continue growing, learning, developing and thriving (Drago-Severson, 2006, in press; Kegan, as cited in Carroll, 2006). One pathway to supporting principals is to develop how they might better support their teachers. Nurturing principals as they enhance their capacities to be professional *learning* leaders—even more effective adult developers—holds great promise.

Nationwide, educational leaders search for promising initiatives to improve teachers' professional development. When a principal supports teacher learning and growth, teachers flourish (Blase & Blase, 2001, 1999). We need greater knowledge about practices that support teacher learning and growth by focusing on how teachers make sense of their experiences and how such practices actually work, across different school contexts (Darling-Hammond, 1999, 2003; Fullan, 2005; Johnson and The Next Generation of Teachers, 2004; Renyi, 1996). We also need a deeper understanding of how school leaders can attend to the learning and development of others.

This study responds to these calls. This research examined how a diverse sample of school leaders makes sense of promoting teacher learning and the practices they employ to support faculty growth. From 1999–2001, through qualitative interviews and document analysis, I examined how 25 school leaders from public, Catholic, and independent schools with varying levels of financial resources understand the practices they use to support teacher learning, why they think these practices are effective, and the developmental underpinnings informing the practices. To make visible the kinds of initiatives that hold the potential to support teachers' transformational learning in other school contexts as well, this study addresses important practical and theoretical questions:

1. How do principals exercise their leadership to promote adult learning?
2. What are the practices they use to support transformational learning—learning that helps adults develop greater (i.e., more complex) cognitive, affective, interpersonal, and intrap-

ersonal capacities to better manage the complexities of teaching and learning?

3. How do these leaders support their own development?
4. What developmental principles inform practices that support transformational learning?

I discovered that the participating school leaders employed four common practices to support teacher learning, which I call pillar practices. In this paper, I examine these practices, how the principals make sense of them, and illuminate how they manifest in the different contexts in which these leaders serve. In addition, I discuss the developmental principles informing these practices and highlight why these practices can support adults with different needs, preferences, and developmental orientations. By understanding the range of practices these principals employ to support teacher learning in their own specific contexts and identifying the developmental principles underlying such practices and the process of growth, we can better support the teaching and growth of children *and* adults in schools.

THEORETICAL FRAMEWORK

Three literatures inform this investigation: literature on leadership supportive of teachers' development, professional development literature, and adult learning and constructive-developmental theories. First, I provide an overview of these literatures. I revisit these literatures in discussing research findings.

Leadership in support of teacher learning

Researchers and practitioners have long recognized that attention to the role of the principal is *one* key to school improvement (Barth, 1980; Glickman, 1990; Howe, 1993). Leadership supportive of adult development makes schools better places of learning for children and youth (Darling-Hammond & Sclan, 1996; Fullan, 2001, 2005; Guskey, 1999), making it critical to attend to the growth of adults as well as children (Donaldson, 2006, 2001; Johnson et al., 2004; Levine, 1989).

The literature on leadership suggests principals can support teacher learning by: (1) creating a developmentally-oriented school culture (Evans, 1996; Sarason, 1995), (2) building relationships among teachers (Barth, 1990; Bolman & Deal, 1995), (3) emphasizing teacher learning (Johnson, 1990, 1996; Johnson, Birkeland, Kardos, Kauffman, Liu, & Peske, 2001, 2004; Blase & Blase, 2001), and/or (4) focusing on teachers

personal growth (Elmore, 2002, 2004; Fullan & Hargreaves, 1992; Huberman, 1988; Sergiovanni, 1995). However, the question of how *specific* school-based leadership practices support teacher growth has not been investigated (Danielson, 1996; Lieberman & Miller, 2001, 1999). The need for practices informed by theories of adult learning and development about how to better support teachers is real and clearly needed. By shedding light on the developmental principles informing these practices, my research illuminates how principals in a variety of school contexts employ initiatives to support teachers' transformational learning.

Professional development

Historically, teachers have been supported in their growth through professional development programs. Sparks (2000) found that professional development occurs through collaboration across K-12 school contexts, regardless of affluence and ethnic diversity. Others assert that teacher collaboration, especially in the form of teaming and mentoring, reduces teacher isolation, initiates change, and establishes knowledge-based management systems (Friedman, 1997; Hannum, 2001; Meier, 2002; Pappano, 2001; Rogers & Babinski, 1999). Still, research shows that collaboration varies qualitatively by school context and individual culture (Cochran-Smith & Lytle, 2001). The need for time to be devoted to professional development is a resounding theme (Darling-Hammond & Sykes, 1999; Johnson et al., 2004; Little, 2001; Mann, 2000; Sykes, 1996).

Furthermore, scholars suggest that effective professional development for teachers should be: (1) embedded in and derived from practice, (2) ongoing rather than one-shot experiences, (3) on-site and school based, (4) focused on student achievement, (5) integrated with school reform processes, (6) centered around teacher collaboration, and (7) sensitive to teachers' learning needs (Hawley & Valli, 1999). Killion (2000a) recommends re-evaluating traditional professional development, since teachers prefer informal opportunities that occur spontaneously in the school.

Echoing Killion (2000a), Blase and Blase (2001) advocate for a collaborative or cooperative approach to teacher learning. Likewise, Osterman and Kottkamp (1993) write that ". . . collaborative approaches provide access to more relevant information and alternative perspectives, promote reflective practice, help develop a culture that supports learning and growth, and facilitate change by virtue of the encouragement and validation of changes that occur" (p. 76). The principal's place in this approach is as facilitator rather than as authority figure (Blase & Blase, 2001; Fullan, 2003).

Others have argued that there is a lack of clarity and consensus as to what constitutes teacher development. Moreover, models of professional development operate on divergent assumptions about *how* teacher growth can be supported and implemented (Brookfield, 1995; Cochran-Smith & Lytle, 2001; Cranton, 1996; Drago-Severson, 1994, 1996, 2004a; Mezirow, 2000a). Furthermore, teachers' successful development demands more than increases in their fund of knowledge or skills—*that is, informational learning*. Today's K-12 schooling challenges demand changes in the *way* adults' know—*that is, transformational learning*. Because many models of professional development employed in K-12 do not adequately consider how adults make sense of their experience, they lack a framework for facilitating development (Kegan & Lahey, 2001; Peterson & Deal, 1998). Researchers and theorists alike highlight the need to focus on individuals' meaning-making (Kegan, 1982, 1994) and their "frame of reference" for understanding the world (Mezirow, 2000a, p.7), the teacher as a developing person, and context as an ingredient in growth when considering how to support adult learning (Kegan, 2000, Johnson et al., 2004; Mezirow, 1978, 1991, 2000b; K. Taylor, 2000).

In the field of adult education, however, scholars and practitioners are implementing professional development programs for teachers of adults that are informed by adult learning theories (e.g., Cranton, 1996; Cranton & King, 2003; Kegan & Lahey, 2001; King & Lawler, 2003; Lawler, 2003; Mezirow, 1996, 2000b; K. Taylor, 2000; Yorks & Marsick, 2000). These models center on teachers as adult learners, principles of adult learning, and professional development as an educational process. They are designed for adult educators in various contexts (e.g., adult basic education, workplace education, higher education, and corporations).

Specifically, Lawler and King (2000) suggest six adult learning principles that can guide the design, implementation, and assessment of professional development programs for teachers of adults: ". . . create a climate of respect, encourage active participation, build on experience, employ collaborative inquiry, learn for action, and empower the participants" (pp. 21–22). In fact, Lawler (2003) maintains that not only is it important for teachers to reflect on their practice and critique their assumptions about learning, teaching, and goals, but it is also essential for those who design and implement these programs to engage in critical questioning throughout program implementation to assess effectiveness and enhance adult growth. Models of professional development for adult educators offer new and promising insights for structuring, and assessing professional development programs for K-12 teachers (see e.g., King & Lawler, 2003).

For example, in the field of adult education, developing action plans (King, 2003) that include reflective activities are employed to help educators reflect critically on their teaching practice, and guide dialog and consideration of new perspectives. Also, case studies based on real life experiences have been used as platforms for reflective practice (Marsick, 1998). Engaging in dialog and analysis in groups about teaching (Lawler & King, 2000), crafting action plans, and/or discussing case studies promote reflection, critical questioning of values, beliefs, and assumptions about teaching and worldviews, and possibly support transformative learning among adult educators (Cranton & King, 2003; Hansman, 2001).

The theories of adult learning and development informing these models illuminate the various types of changes that can occur when adults learn, clarify *how* the process of learning and education can support different types of change, and help us to understand *how* to support changes in adults' skills, knowledge, behaviors, reflective capacities, and even meaning-making systems. Making stronger connections between the adult learning and developmental theories that inform professional development practices for adult educators with those shaped for K-12 educators can strengthen professional development for K-12 teachers so that they are better equipped to meet challenges and better supported in their growth. Next, I discuss principles that serve as the foundation for adult learning and constructive-developmental theories.

Adult learning and constructive-developmental theories

Theories of adult learning and development shed light on how we can better support adults' learning as they engage in professional development. In addition, they offer tools for understanding how adults experience leadership practices and professional development programs aimed at supporting adults with a diversity of needs, preferences, and developmental orientations. In this section, first I illuminate key tenets underlying adult learning theories and discuss Robert Kegan's (1982, 1994) constructive-developmental theory. Adult learning and constructive-developmental theories are complementary and shed light on how to better support the *processes* of adult learning and growth.

Drawing on theory (e.g., Kegan, 1982, 1994, 2000; Mezirow, 1991, 1994, 2000a; E. W. Taylor, 1997, 2000; K. Taylor, 2000; Taylor, Marienau & Fiddler, 2000), and Mezirow's (2000a) theory, in particular, I define transformative learning as a *process* of changing our taken-for-granted mindsets and frames of reference—which do not adequately explain a new experience—by making them more open, inclusive, reflective and

integrated. This enables us to envision alternative ways of thinking, and to develop beliefs that can more appropriately guide behavior. I employ Kegan's (1994, 2000) conception of transformational learning to illuminate how the *form* or *structure of mind* can develop and become more complex through the growth process. Thus, transformational learning refers to increases in, or complexifying, mental and relational capacities resulting from a change in mental structure, which, in turn, enables a person to better manage the demands of work and life. It is important to note, though, that a person can have a transformative experience and become more capable of managing life's complexities, yet this ability may well have been achieved through instrumental and communicative learning, and not transformative or transformational learning in the ways that Kegan and Mezirow describe it.

Although adult learning and constructive-developmental theory can be powerful tools for understanding how adults develop during K-12 professional development programs (Cranton, 1996; Drago-Severson, Helsing, Kegan, Broderick, Popp, & Portnow, 2001; Drago-Severson, 2004a, 2004b; Hammerman, 1999; Kegan, 2000; Levine, 1989; Mezirow, 2000b), they are underutilized. Some developmentalists criticize current models for supporting teacher development (Kegan & Lahey, 2001; Levine, 1993; Oja, 1991), arguing that adults at various stages of ego and intellectual development respond differently to these programs. In fact, Kegan (1994) contends that many prevalent models outline practices that may be beyond teachers' capacities.

In general, scholars agree on key principles that serve as the foundation for adult learning theories. First it is essential to recognize that adults bring a diversity of life and educational experiences, needs, personalities, and learning styles to their learning and that these shape their perspectives on learning, education, and professional development experiences (Cranton, 1996; Kolb, 1984; Merriam & Caffarella, 1999; Mezirow, 1991, 2000a). Second, adults need to understand why they need to learn something and want their formal and informal learning to be of value to them, connected to their lives, and meaningful (Brookfield, 1987; Knowles, 1984; Taylor & Marienau, 1995). Third, physical and psychological changes must be considered when supporting adult learning (Bee, 2000; Lawler, 2003). Fourth, it is critical to understand social context and culture when supporting adult learning (E. Taylor, 1994; Lawler, 2003). Last, adults learn experientially and approach learning as problem-solving (Knowles, 1984; Mezirow, 1991).

Jack Mezirow (1975), the pioneer of transformational learning theory, introduced this theory to the field of adult education. While Mezirow's theory has been extended since its original conceptualization (Merriam

& Caffarella, 1999; E. Taylor, 1998, 2000), it established fundamental ideas about transformative learning in adulthood. Central to his theory is the importance of critical reflection on assumptions, actions and behaviors, and validating meaning-making by examining and evaluating reasoning. Put simply, Mezirow's theory points out that as we make meaning of life experiences we develop a "frame of reference" that has cognitive, affective, and conative dimensions for understanding and interpreting experience. Mezirow (1994) contends that, "We resist learning anything that does not comfortably fit our meaning structures, but we have a strong, urgent need to understand the meaning of our experience" (p. 223). He (1991, 2000a), like other scholars (Brookfield, 1987, 1995; Cranton, 1994, 1996), points to the intimate connection between self-examination and transformative learning.

According to Mezirow (1991, 2000a), meaning structures are transformed through the process of critical self-reflection in which we reconsider and question our beliefs and *how* we are interpreting experience. Critical reflection can occur in the context of reflecting on the content of the problem, the process of problem solving, or the problem's premise. Disorienting dilemmas serve as triggers for reflection. Transformative learning, in Mezirow's (2000a) view, is the *process* of transforming our taken-for-granted habits of mind and frames of reference, which do not adequately help us to make sense of a new experience, by making them more permeable, reflective, and integrated. In so doing, we can envision alternative ways of thinking, and "generate beliefs and opinions that will prove more true or justified to guide action" (Mezirow, 2000a, p. 8). This process requires that we develop a heightened awareness of how we know what we know and the values that produce and influence our perspectives (Mezirow, 2000a).

Kegan (2000) explains that what Mezirow calls a "frame of reference," which consists of a habit of mind and a point of view, is essentially a meaning-making system or an epistemology.¹ To support the process of transformational learning, Kegan (2000) suggests that we must first understand an adult's current epistemology, since it shapes how a person interprets *all* internal and external experiences. He calls this a process of "meaning-forming." Next, we need to attend to a process—"reforming our meaning-forming" (Kegan, 2000, p. 52). When transformational learning occurs, Kegan asserts, there is a change in the *structure* of a person's meaning-making system.

Kegan's (1982, 1994, 2000) constructive-developmental theory attends to how we *actively* construct our realities (with respect to cognitive, interpersonal, and intrapersonal development) and considers the ways in which our ways of knowing can become more complex and expansive

over time. I refer to a person's meaning system as a way of knowing. This theory illuminates qualitatively different meaning systems in adulthood that are not necessarily connected to gender, age, or life phase. Each developmental level has its own logic or *form*, which builds upon the previous logic by incorporating the former into its new, more expansive meaning-making system. Moving from one developmental level to another is a progression of increases in an individual's capacities and a change in complexity of a person's mental structure. Kegan's theory provides insight into how to better support teacher learning by understanding adults' current ways of knowing and offering supports and challenges to facilitate growth.

Growth is a gradual process through which a person renegotiates what *is* self and what *constitutes* other. Kegan (2000) calls this a renegotiation of the "subject-object balance," which composes a way of knowing. What a teacher—or any person—is "subject to" in a way of knowing, he cannot take as separate from himself because he is *identified with it and run by it*. What we are *subject to*, we do not question and cannot *look at*; it is a part of us. In contrast, what a person can hold as "object" in a way of knowing, he can take a perspective on and *see*. What is "object" can be *reflected on and considered*; we *can* control it, be responsible for it, and manage it. Transformation learning is a gradual process by which "what was 'subject' in our knowing becomes 'object'" (Kegan, 2000, p. 53). During this process, the self emerges from being identified with a culture (e.g., its needs, its interpersonal mutuality, or its own authorship), to being able to take it as object, and thus to take a perspective on it, *and control it*.

Table 1. Ways of Knowing According to Kegan's Constructive-Developmental Theory

Stage Way of Knowing	Stage 0 Incorporative	Stage 1 Impulsive	Stage 2 Instrumental	Stage 3 Socializing	Stage 4 Self-Authoring	Stage 5 Inter-individual
Underlying Thought Structure Subject (S): what a person is identified with Object (O): what a person can reflect on and take a perspective on	S: Reflexes (sensing, moving) O: None	S: Impulses, perceptions O: Reflexes (sensing, moving)	S: Needs, interests, wishes O: Impulses, perceptions	S: The interpersonal, mutuality O: Needs, interests, wishes	S: Authorship, identity, psychic administration, ideology O: The interpersonal, mutuality	S: Interindividuality, interpenetrability of self-systems O: Authorship, identity, psychic administration, ideology
How the self defines itself			Orients to self-interests, purposes, wants, concrete needs.	Orients to valued others' (external authority) expectations, values and opinions.	Orients to self's values, internal authority, learning from	Orients to multiple self-systems, open to other people.

Orienting concerns			Dependence on rules, decisions are based on what the self will acquire.	Dependence on external authority, acceptance and affiliation are crucial. Self feels responsible for other's feelings; holds others responsible for own feelings. Criticism & conflict are threats to the self.	Reliance on own internal values. Criticism is evaluated and used according to internal standards. Concern with one's own competence and performance. Holds contradictory feelings simultaneously.	Committed to self-exploration. Engaging with conflict is an opportunity to let others' inform and shape one's own thinking. Conflict is natural to life and to enhancing thinking.
Guiding questions for self			"Will I get punished?" "What's in it for me?"	"Will you (a valued other/ authority) still like/value me?" "Will you (a valued other/ authority) still think I am a good person?"	"Am I maintaining my own standards and values?" "Am I competent?" "Am I living, working, loving to the best of my ability?" "Am I achieving my goals and being guided by my ideals?"	"How can other people's thinking help me to enhance my own?" "How can I seek out information and opinions from others to help me modify my own ways of understanding?"

SOURCE: A similar version of this table appears in Drago-Severson (2004a). "Underlying Structure." Row 1 of Table 1 is from Kegan (1982) *The Evolving Self* (pp. 86–87).

A person's way of knowing shapes how he understands his role and responsibilities as a teacher, leader, and learner, and how he thinks about what makes a good teacher and what constitutes a good leader. Three qualitatively different ways of knowing are most prevalent in adulthood: the instrumental way of knowing, the socializing way of knowing, and the self-authoring (See Table 1). While my focus here is on the characteristics of these three ways of knowing, it is important to note that there are four transitional stages between each of them (see Drago-Severson, 2004b; Lahey Souvaine, Kegan, Goodman, & Felix, 1988). This framework helps in understanding how teachers might experience participation in practices aimed at supporting their learning, supports and challenges that facilitate growth for adults with *different* ways of knowing, and the developmental principles underlying the principals' practices.

As Table 1 shows, the meaning-making system dictates how professional development opportunities will be experienced by adults with different developmental orientations. Put simply, teachers with different prefer-

ences, needs, and developmental orientations require *different* forms of support and challenge to participate effectively in practices intended to support learning. By focusing on the supports and challenges to a person's way of knowing, principals are better able to facilitate the process of growth. Kegan's theory also considers how context can be shaped as a "holding environment" to provide both supports and challenges for growth. It offers a way to understand the developmental demands placed upon adults, demands which call for not just a change in skill (i.e., informational learning), *but a change in a person's way of knowing* (i.e., transformational learning).

While I employed other theories (see Drago-Severson, 2004a) to inform analysis (e.g., Brookfield, 1987, 1995; Cranton, 1996; Mezirow, 1991, 2000a; Osterman & Kottkamp, 2004; K. Taylor, 2000), in this paper I focus primarily on how constructive-developmental theory can be used as a lens to understand how (a) adults with *qualitatively* different meaning systems might experience four leadership practices aimed at supporting growth, (b) the nature of an adult's current meaning system shapes the types of learning challenges he faces, and (c) supports for adult growth need to take different forms, depending on individuals' developmental orientations. I also engage theory (Brookfield, 1987, 1995; Daloz, 1983, 1986, 1999; Kegan, 1982, 1994, 2000; Kegan & Lahey, 1984; 2001; Mezirow, 1991, 2000a; K. Taylor, 2000) to illuminate developmental underpinnings of the principals' practices and the interplay between an individual's developmental capacity and his engagement in practices. I focus on how teachers with developmental orientations need *different* forms of support and challenge to maximize opportunities for growth.

METHODS²

Participants

Twenty-five participants with at least five years' experience were purposely selected as school leaders responsible for supporting teacher learning. The sample is diverse with respect to their gender, ethnicity, number of years in leadership positions, and educational backgrounds. As Table 2 shows, I recruited principals from three types of schools—public, private, and Catholic, which also differ according to grade levels (i.e., elementary, middle, high school, K-12), student populations, geographic location (i.e., urban, suburban, rural), and financial resource levels.

2000–2001 school financial resource levels were determined by evaluating school financial reports (e.g., Boston Plan for Excellence, 1999, district financial reports, annual reports), Web sites, and publications. This

determination, for all schools, *did not* include the principals' strategies to obtain external grant funding or funding from other sources (e.g., federal, state, development fundraising or gifts), though these were assessed. For the independent schools, including Catholic independent schools, I also examined their 2000–2001 endowments. In the case of public schools, their approximated school budgets for the year (e.g., "General Fund [which] refers to money that is allocated to the schools by the city budget" [Boston Public School Fiscal Year Report, 2001, p. 203]) were listed. For Catholic parochial schools, 2000–2001 operating budgets were examined. Reported numbers in Table 2 are listed in millions, unless otherwise noted. In one case, this information was initially unavailable. Therefore, the principal's perceptions of his school's financial resource level, relative to other schools of the same type in similar locations (e.g., urban Catholic schools in the same state) were documented and verified by published annual reports and Web sites for triangulation of data. In a follow-up interview, this principal provided internal documents that confirmed my earlier assessments. In the two places where no amount appears, participants wanted to protect institutional privacy (one participant preferred anonymity). Human resource levels (how many full-/part-time faculty, administrators, and staff worked at each school) were assessed through Web sites, published district and internal school documents, and confirmed in interviews. Such triangulation strengthened reliability.

Table 2. Principals and School Demographic Information.

Public

Principal	School/Grades	Years	# Students	# Teachers	Location	Student Diversity	Resource Level
Mr. Kim Marshall	Mather School/K-5	13	600	28 (31)	Dorchester, MA: Urban	High	Low/\$2.6
Mr. Joe Shea	Trotter School/K-5	20	607	55	Boston, MA: Urban	High	Low/\$3.0
Dr. Mary Nash	Mary Lyons School/K-8	25	120	15 (27)	Brighton, MA: Urban	High	Medium/\$1.5
Dr. Len Solo	Graham-Parks School/K-8	26	370	22 (47)	Cambridge, MA: Urban	High	Medium/\$3.2
Ms. Muriel Leonard	McCormick School/6-8	18	690	60	Dorchester, MA: Urban	High	Low/\$3.7
Ms. Kathleen Perry	Lake Worth Community H.S./9-12	31	3,167	165 (180)	Lake Worth, FL: Urban	High	Medium-High/\$37
Dr. Jim Cavanaugh	Watertown H.S./9-12+GED	22	768	60	Watertown, MA: Urban	Medium-High	High/\$24.5
Dr. Larry Myatt	Fenway H.S./9-12+GED	19	300	35	Boston, MA: Urban	High	Low-Medium/\$1.9

Catholic

Principal	School/Grades	Years	# Students	# Teachers	Location	Student Diversity	Resource Level
Mrs. Deborah O'Neil	St. Peter's School/K-8	10	235	13	Cambridge, MA	High	Low/\$800K
Sr. Barbara Rogers	Newton Country Day School of the Sacred Heart/5-12 (girls)	20	325	59	Newton, MA	Medium	High/\$6
Mr. John Clarke	Cardinal Newman H.S./9-12	8	910	67	W. Palm Bch, FL	High	Medium/\$5.1
Sr. Judith Brady	St. Barnabas/9-12	35	283	24	Bronx, NY	High	Low/\$1.2
Mr. Gary LeFave	Matignon H.S./9-12	29	535	36	Cambridge, MA	Medium	Low/\$3.2
Sr. Joan Magnetti	Convent of the Sacred Heart/pK-12	24	626	58	Greenwich, CT	Low	High/\$5.2

Independent

Principal	School/Grades	Years	# Students	# Teachers	Location	Student Diversity	Resource Level
Mr. John Thompson	Palm Beach Day School/K-9	40	352	45	Palm Beach, FL	Low	Medium-High/\$3
Dr. Sarah Levine	Polytechnic School/7-12	30	840	108	Pasadena, CA	High	Medium/N/A
Dr. Sarah Levine	Belmont Day School/pK-6	30	200	26 FT, 6 PT	Belmont, MA	Medium	Medium-High/\$30
Dr. Dan White	Seabury Hall/7-12	20	391	41	Maui, HI	Medium	Low-Med/\$700K
Ms. Barbara Chase	Philips Andover Academy/9-12	21	1,065	218	Andover, MA	Medium/High	Very High/\$535
Dr. Sue David	Participant prefers anonymity/9-12	>10	+/-300	>75	Anonymous	Medium	High/<\$60
Mr. Joe Marchese	Westtown/9-12	30	590	87	Westtown, PA	Medium	HighHigh/\$60
Dr. Jim Scott	Punahou School/K-12	25	3,700	281(334)	Honolulu, HI	High	High,\$68
Mr. Scott Nelson	Rye Country Day School/pK-12	16	770	125	Rye, NY	Medium	Medium-High/\$13
Ms. Mary Newman	Buckingham, Browne, & Nichols/pK-12	22	950	170	Cambridge, MA	High	High/\$30
Mr. Jerry Zank	Canterbury School/pK-12	30	520	62	Fort Myers, FL	High	Low/\$800K
Ms. Shirley Mae	Participant prefers anonymity./9-12	>25			California: Urban	High	Prefers anonymity

Note: Parenthetical numbers represent the number of faculty and support staff (i.e., assistants and specialists). Resource levels also indicate student SES. Resource levels indicate School Budget or Endowment and are listed in hundred-thousands. A version of this table appears in altered form in Drago-Severson, 2002, 2004a, and Drago-Severson & Pinto, 2006.

Thirteen of the principals were recommended by colleagues at Harvard Graduate School of Education, because they were perceived by colleagues to be exemplary in terms of their dedication to supporting teacher learning by prioritizing contexts for teachers' professional reflection *within* their schools. Specifically, these were leaders who did the following:

- Provided various forums for teachers to discuss recent literature and reflect on practice through writing and discussion.
- Sought out additional resources to provide professional development opportunities (e.g., ensuring substitutes for teachers when they were working on special collaborative projects, encouraging teachers to attend and present at professional conferences).
- Provided opportunities for shared leadership (e.g., through mechanisms such as cross-disciplinary teams, or cross-functional teams).
- Held teachers accountable for creating high expectations for children while principals provided feedback and encouraged dialog in order to achieve these goals.

For the sake of comparison and diversity, I included a second group of principals who were *not identified* by my colleagues or myself as exemplary in terms of supporting teacher learning *by prioritizing reflective contexts within their schools*. In other words, the principals in this second group were not known as leaders who incorporate teacher learning as part of their *explicit* mission. I sought a balanced sample, and selection of this second group was guided by the following criteria: personal or colleague referral, school's financial resource level, school type and level, population served, and location.

In this article, I focus intentionally on the principals' successful practices, regardless of which of the described two groups they fell into, to provide readers with effective ideas for their own practice and future research. A second reason I emphasize these principals' successful prac-

tices, rather than shortcomings, is because 23 of the 25 participants opted to use their real names. Also, in fairness to the full sample, I do not name which principals were selected into which of the two groups (i.e., leaders who were recognized for excelling in their support for teacher learning and those who were not initially, explicitly recognized in this way during sampling). It is important that readers understand that the participants who are not quoted herein are not necessarily *unsuccessful* in their leadership for supporting teacher learning.

DATA COLLECTION

Documents and in-depth qualitative interviews were the two main data sources for this study. In addition, I conducted observations at each school in all but one case, which provided important contextual data.

Documents

Approximately 60 documents were analyzed, including mission statements, self-study reports, principals' written memos to me about the research after interviews, Web sites, school budgets, speeches, principals' memos to various constituencies, and demographics. The memos relating to the study provided validity checks and triangulation of data. Collectively, documents also served as validity checks and provided alternative perspectives on data. Situating the findings within other literature (e.g., professional development, adult learning theories, and constructive-developmental theory) provided comparisons for evaluating reliability and triangulation of data.

Interviews

I conducted semi-structured, qualitative interviews (tape-recorded and transcribed) with participants, approximately 75 initial hours of initial interviews and 14 hours of follow-up. In all but one case, I also toured the school with the principal and took fieldnotes. To collect comparable data, I asked participants very similar questions about specific interview topics, including: principals' background and educational experiences, their practices for facilitating teacher learning, why they thought their initiatives were effective, how their practices for teacher learning worked in their school, the influence of different resources on their practices for supporting adult learning, the challenges they face in supporting teacher learning, and their strategies for their own self-renewal. I also asked questions that were specific to each participant and his or her school context.

All participants were invited to review their interview transcripts, and all but three chose to do so, with six making minor syntax changes to their transcripts. The principals' review of their transcripts provided validity checks and triangulation of data.

DATA ANALYSIS

I employed various analytic strategies to address each research question. These included open and theoretical coding (Strauss & Corbin, 1998), crafting profiles (Seidman, 1998), writing in-depth narrative summaries (Maxwell, 1996), and building matrices (Miles & Huberman, 1994).

Following each interview, I wrote fieldnotes about main interview themes, my observations of the school context, and how literature and theory cited herein informed the principal's experiences. Next, I composed analytic narrative summary memos (Maxwell, 1996), in response to five key analytic questions for each participant after interview transcription. Analytic questions focused on each principal's understanding of: the rewards and challenges of supporting teacher learning; their role in and the practices they employ to support teacher learning within their schools (e.g., teaming and mentoring); how their initiatives worked within their schools, and changes in their thinking about how to best support teacher learning.

To address each research question, interviews, documents and fieldnotes (including theoretical notes) were analyzed for important concepts and themes by using a code list of more than 50 codes. Analytic strategies focused on comparing the reported practices of the groups as a whole, between the two groups of principals, and within each school type. Analysis was guided by a grounded theory approach (Glaser & Strauss, 1967), which accounts for the multiple levels of data and perspectives on its interpretation by attending to data at the level of the individual, group, school type, and sample as a whole. Various literatures and theoretical frameworks cited herein also guided analysis. I crosschecked codes of all raw data and interpretations (Miles & Huberman, 1994) with two colleagues³ to strengthen analysis and to integrate alternative interpretations. Along with comparisons to relevant literature, crosschecking discussions and participants' feedback on interview transcripts supported the reliability of interpretations.

I employed theoretical and emic codes (Geertz, 1974), after which I organized codes into thematic matrices. Next, I grouped coded interviews by school type and also by financial resource level to examine patterns across categories. In addition, composing narrative summaries (Maxwell & Miller, 1998), profiles (Seidman, 1998), and displays allowed

for the examination of patterns across categories (e.g., principals' perspectives on why teaming is important). I subsequently crafted detailed analytic memos informed by developmental theory and specifically examined the factors (e.g., geographic location and financial resources) that co-occurred with similarities and variations between participants' practices for supporting teacher learning. These were then developed into case studies of the principals, with interview text serving as examples.

There are several ways I attended to validity. Multiple data sources (e.g., interviews, documents, principals' written memos and emails to me about the study) allowed for multiple perspectives on data and interpretations. Myself and at least one additional researcher employed each analytic technique during all analytic phases (e.g., crosschecking codes and interpretations) to strengthen analysis and include alternative interpretations. I also incorporated principals' feedback and interpretations on learnings (e.g., by conducting member checks [Maxwell, 1996]. and by inviting their feedback on interview transcripts and article drafts before publication). These enabled me to follow up on interviews, and to further investigate their understanding. Throughout analysis, data were examined for both confirming and disconfirming instances of themes (Miles & Huberman, 1994) to test my developing understanding (Merriam, 1998). When data collection and analyses are integrated, analysis gains depth (Coffey & Atkinson, 1996). This study benefited from this type of intended and ongoing synthesis of data.

RESULTS

Through case examples, I describe the four broad initiatives these principals employed to support teachers' transformational learning in spite of the contextual challenges in their leadership. In addition, I identify the developmental principles informing their practices. While not my focus here, it is essential to note that these school leaders discussed financial and human resource challenges (e.g., time, and resistance to change) in their creative strategies to support teacher learning despite these obstacles (see e.g., Drago-Severson, 2002, 2004a; Drago-Severson & Pinto, 2004). While they named similar challenges, hurdles are context dependent, vary in terms of influence, and the creative strategies used to overcome them are tied to each school's needs.

PRACTICES IN SUPPORT OF TEACHER LEARNING

All of the principals used—to different degrees—four mutually reinforc-

ing initiatives aimed at supporting adult learning, which constitute what I call a *Learning-Oriented Model of School Leadership* (Drago-Severson, 2004a). These *pillar* practices include: (1) teaming/partnering with colleagues within and outside of the school (sharing in work and decision-making), (2) providing teachers with opportunities to take on leadership roles (sharing leadership *with* intentional supports and challenges to facilitate growth), (3) engaging in collegial inquiry (creating contexts for inquiry, reflection, and critical thinking), and (4) mentoring (pairing graduate student interns and new teachers with experienced teachers). In presenting these practices, I illuminate how they are *developmentally robust*—meaning that any one of them can support teachers with different needs, preferences, and developmental orientations. Examples illuminate the varied ways these practices were implemented across school type. Since adults make sense of these practices in different ways, they need different forms of support and challenge to benefit most from them.

Pillar #1: Teaming

Almost all principals used teaming to promote individual and organizational learning through various forms of partnering and adult collaboration. Many organize their schools for teamwork (e.g., curriculum teams, teaching teams, literacy teams, technology teams, and diversity teams) because they think that teaming opens communication, decreases isolation, encourages collaboration and joint inquiry, and creates interdependency. They explained that teaming enables teachers to “take a broader perspective on themselves and their work,” as Larry Myatt, principal of Fenway High School in Boston, explained. Since most of these principals were active members of teams, teaming also served as a context for their learning.

About teaming

Teaming has been shown to cultivate avenues for teacher collaboration. For example, Sparks (2000) emphasizes the importance of creating contexts in which teachers can engage in dialog and reflection, mentoring, action research, and curriculum design. “Sharing responsibility for group learning and working together enhances effectiveness,” York-Barr, Sommers, Ghere, & Montie (2001) write. Another way teaming contributes to a culture of adult development is by providing teachers with space to examine their assumptions and practice (Brookfield, 1995; Schön, 1987). Kruse (1997) found that when teachers examine their

assumptions and values, they are better able to alter practices and make future decisions. Reflecting with colleagues, in her view, is an essential step toward changing old practices and developing new ones.

Given this power to provide a space for transformation, many of those committed to school reform advocate teaming. In their view, inviting teachers to work in teams enhances learning, improves teaching, initiates system-wide change, encourages innovation, *and* empowers teachers (Meier, 2002; Senge, Kleiner, Roberts, Ross, & Smith, 1994; York-Barr et al., 2001). While sometimes met with initial teacher resistance and conflict, Weiss and Cambone (2000) discovered that teacher teams engaging in shared decision-making with principals can begin to unfreeze assumptions and antiquated ways of working. Teaming engenders dialog, builds leadership capacity, and nurtures individual and organizational growth (Elmore, 2002, 2004; Elmore & Burney, 1999).

Examples of Principals' Use of Teaming

Teaming was employed by nearly *all* of the principals.⁴ In fact, across school type and resource level, teaming was *the* most frequently employed practice for supporting adult learning. These principals discussed three main reasons for using teams: sharing leadership, building community, and helping adults manage change and maximize diversity. Teaming helped teachers, the principals, and other adults in the school to build relationships and decrease feelings of isolation. In teams, members could also share information and expertise.

Principals reported that teaming provides opportunities for individuals to articulate and become more aware of their own and other people's thinking—and assumptions. Working with teachers in teams offers diverse points of view when considering important changes in the school, goals, and accountability for meeting them. Several principals, for instance, explained how teams sometimes challenged well-established school norms, which, in many cases, spurred these principals and their schools to reevaluate and collaborate to invent strategies for change (e.g., literacy programs, and technology initiatives). Thus, teaming holds the potential to be a context for growth and development both of team members and of the school.

Across school type, principals emphasized that a main teaming method is through team teaching. Most reported that teachers also form study groups, research groups, and book clubs. Teaming teachers allows adults to visit each other's classrooms and in some cases regularly visit other schools to improve practice. The majority of principals value teaming for curricular issues and for examining student work. While most of the high

school principals focused on departmental teaming, the elementary and middle school principals generally pursued grade-level teaming. Following are examples of how and why teaming works, from the principals' perspectives. I selected these cases because they are emblematic of themes voiced by others.

Receiving Feedback: Learning from Multiple Perspectives

Like many of the principals, Dr. Sarah Levine, former head of Belmont Day School and also of Polytechnic School, employs teaming as a way for teachers to offer feedback to her and gain diverse perspectives on issues. Sarah explained her thinking about the importance of a trusting relationship with team members:

The ability to tolerate and even invite disagreement and confrontation is important, I think. It's too easy to . . . want people near you to agree and support. A key to good leadership is finding people whom you can trust enough so that they can disagree and confront you in a way that's not ultimately threatening.

Sarah's experience resonated as a core theme across the principals in this study in that they valued the opportunity teams provide for exposure to diverse viewpoints. Sarah saw the practice of inviting adults to work together in teams as an essential element of leadership and organizational learning, as well as a remarkable opportunity to support teacher learning.

Teaching in Teams

One common use of teaming is pairing teachers together to teach. For example, more than two-thirds of the principals explained that associate teachers (graduate-level educators at nearby colleges) are teamed up with experienced teachers at their school. The principals discussed how team teaching sometimes serves different purposes. In a few cases, principals reported that team teaching was a vehicle for one teacher to attend to the class so the other could collaborate with other teachers. In general, these teachers alternated teaching the same class at different times. On the other hand, in close to half of these cases, it was reported to be an opportunity for each teacher to strengthen her practice through dialog and questioning assumptions in an ongoing manner. Team teaching also involved teaching a class together, or one teacher teaching and the other observing or videotaping the lesson for both teachers to view and discuss.

This kind of teaming, many principals explained, provided a chance for teachers to strengthen teaching practices through engaging in regular dialog about practice and through questioning their assumptions about practice and student learning.

Strategy Development and Shared Decision Making

Nearly all of the principals reported that teaming creates a context for shared decision making. Sharing decision making with teams was a way to demonstrate principals' respect for teachers' perspectives by seeking input from teams before major decisions. Teaming, they said, offers individuals and the community the opportunity to consider and deliver more informed and effective decisions.

For example, at Dr. Mary Nash's alternative K-8 public school, teachers make decisions *with* Mary when it seems that a student can no longer be helped by the school. Mary explains,

One of the things that the teachers have asked me to do is never make a decision on my own, whether or not it's time to let go of a kid . . . And we only made one decision like that but it had a big effect on the whole faculty and they came to me and they said, "It's not right. We need to make those decisions together as a group."

Mary implemented "service team meetings," which meet in the morning every day before the official school day. The purposes of these meetings are to address the students' tendency to "split the adults," develop shared understandings, and provide an opportunity to reduce isolation. Adults discuss ways they can work with particular children or issues that arise.

Discussing Curriculum and Student Work

Many principals highlighted the importance of teams of teachers giving and receiving input on curricula and assessments of student work as a way to support adult learning. Across school types, principals emphasized how teaming improves conditions for individual students, teachers, and schools as learning centers. Jim Cavanaugh, principal of Watertown high school, explained the benefits of teams reviewing student work:

[Working with others in a team] can be a gentle process, it's not criticizing the teachers and it exposes so much when you have

five or six pairs of eyes looking at a piece of work and asking questions. . . . They ask clarifying questions and then they ask . . . questions that make you think about what you did and how you set the lesson or how you set up the learning task as well as what the student has done.

Employing the practice of teaming enables Jim and the teachers to “ask clarifying questions” of each other—“questions that make you think about what you did.”

A common example of teaming across *all* school types and resource levels is teachers’ regular evaluation of curricula. At Kim Marshall’s public, low financial resource, Boston elementary school, a couple of large projects are based on teaming. One project examined the MCAS (i.e., Massachusetts’ standardized assessment of students’ learning) standards and generated a rubric to illuminate skills that should be taught in each grade. Teachers in teams studied the test to “walk backward” through the grades until they had guidelines. They could then begin to focus on how they would teach these identified content areas and skills.

Engaging with Outside Experts

Almost all of these principals discussed the value of visiting other schools in teams. They believed that teachers can return to their own schools with broadened perspectives.

At Joe Marchese’s school, members of the science department developed a tradition to “close down” for a day and visit another school. Joe admits that some teachers initially complain about having to go. Similar to the challenges Weiss and Cambone (2000) noted in their research, some teachers resist having to go. But, as Joe explained, “they all come back feeling charged up about what they’ve seen, because they have some points of comparison.” Despite initial resistance from some faculty, Joe and his faculty see the practice of teaming as effective since individual faculty benefit from learning about multiple points of view.

Developing Partnerships with Other Organizations

Many of these principals discussed the inherent value of creating teams and networks with organizations outside the school or district as a way to support teacher learning and organizational learning. They discussed important benefits of teaming teachers with outside partners, such as museums, universities, and research centers.

For example, Mary Newman, head of Buckingham, Browne & Nichols School in Massachusetts, discussed how a team of teachers from her school and the Museum of Science in Boston are working together to “infuse our school with new ideas and opportunities for learning for faculty as well as for kids.” Not only do her faculty travel “back and forth” between the school and the museum to collaborate with museum professionals, but the students do as well.

Developmental Benefits of Teaming

Teaming serves a number of developmental purposes, including creating a safe context for broadening perspective, taking risks, and considering new ways of thinking and acting. Several principles of constructive-developmental theory (Kegan, 1982, 1994, 2000) inform how teaming supports the process of transformational learning. Learning to understand others’ perspectives can enhance a person’s potential to better manage multiple perspectives. Articulation of a perspective can afford greater opportunity for individuals to reflect upon ways of knowing in a safe place, thus enabling them to challenge each other to consider new ways of thinking. Teaming provides a “holding environment” (Kegan, 1982) in which professionals feel free to take risks. Over time, engaging in teaming can support transformational learning.

Adults with different ways of knowing, however, will experience teaming in different ways. Importantly, the extent to which individuals are able to benefit from this practice depends on their developmental orientations and the availability of appropriate supports and challenges for growth. Table 3 shows how adults with different ways of knowing might experience teaming.

Table 3. How Adults With Different Ways of Knowing Experience the Four Pillar Practices

Way of Knowing	Orientation to Teaming	Orientation to Leadership Roles	Orientation to Collegial Inquiry	Mentees' Orientation to Mentoring
Instrumental	<p>Teamwork will feel productive if there are concrete guidelines and agreed-upon rules for conversation and achievement of concrete goals. They will experience team members as resources who have information and skills. They will orient toward "right" answers and concrete solutions to problems.</p> <p>Supports:</p> <ul style="list-style-type: none"> • Setting clear expectations and guidelines for teamwork. • Explicitly stating a timetable and concrete goals to be achieved by certain dates. • Providing clear, step-by-step descriptions of ways to proceed with conversations and/or reflective writing. • Focusing on their concrete needs to achieve needed results. <p>Challenges:</p> <ul style="list-style-type: none"> • Creating tasks (i.e., writing in response to probes and discussing responses in pairs) that require abstract thinking and scaffolding them through the process. • Encouraging them to move beyond what they see as the "correct" solutions and toward consideration of other viewpoints could stretch thinking. 	<p>These knowers will orient toward achieving expected results in a leadership role.</p> <p>Supports:</p> <ul style="list-style-type: none"> • Creating concrete goals for successful achievement of their work. • Provide examples of rules, purposes, and goals—and ways to share them with others. <p>Challenges:</p> <ul style="list-style-type: none"> • Encouraging them to open up to multiple perspectives and to consider alternative points of view and/or solutions could help to broaden their thinking. • Opportunities for leadership roles could help these knowers to hypothesize and start testing out alternative ideas and analysis of outcomes. 	<p>Engaging in collegial inquiry will feel supportive if expectations are clearly stated and rules for engaging in discussion are provided.</p> <p>Supports:</p> <ul style="list-style-type: none"> • Opportunities to share concrete details of their practice and whether it is "right" or "wrong." • Engaging in conversations that provide them with concrete advice, skills, and information about practice, for example. • Establishing some concrete outcomes of the process. <p>Challenges:</p> <ul style="list-style-type: none"> • Learning about multiple perspectives through dialog. • Engaging in dialog about their own and other people's perspectives could help them to develop capacities for abstract thinking, transferability of ideas and opinions, and thus, increase capacities for perspective broadening. 	<p>Engaging in a mentoring relationship will feel supportive if clear expectations and some concrete goals are established.</p> <p>Supports:</p> <ul style="list-style-type: none"> • Establishing purposes and concrete objectives for the mentoring relationship. • Mentors who act as experts have valuable experience to <i>give</i> mentees. • Explicitly stating reasoning or argument behind perspectives. <p>Challenges:</p> <ul style="list-style-type: none"> • Learning about multiple perspectives through dialog. • Gradually encouraging movement beyond what they see as the "correct way to do things" and toward open discussions could broaden their perspectives. • Engaging in dialog that encourages these knowers to think differently and more abstractly not only about their own needs and perspectives, but also about others' needs and perspectives on issues.

Socializing	<p>Working with a team can serve as a safe context for learning about colleagues' experience, practices, ideas, perspectives and expertise.</p> <ul style="list-style-type: none"> • Acceptance from important others & authorities is ultimate. • Adherence to unquestioned doctrines & societal expectations is most important. • Conflict and disagreement are threatening. • A team context serves as a place in which they have the opportunity to broaden their own perspectives by learning from valued colleagues, who they would look to for approval and acceptance of their own ideas. • As long as all team members share a similar outlook, which in their view protects relationships with other team members, differences of opinion are okay. • These knowers rely on absence of conflict to feel safe and are comfortable taking risks in this context. 	<p>Need to feel safe asking questions and for help when unsure about what to do.</p> <ul style="list-style-type: none"> • Conflict is experienced as a threat to the self. • Approval of others is of utmost importance. • Authorities and valued others are sources of knowledge and informed opinions about decisions. • Need authority to confirm and accept one's self and one's own beliefs. • Emphasis on loyalty and on everyone coming to a shared understanding or solution. <p>Supports:</p> <ul style="list-style-type: none"> • Authority & valued others confirm, and accept these knowers' selves and their own beliefs. <p>Challenge:</p> <ul style="list-style-type: none"> • Gently encourage person to look to oneself and one's own views when leading and making decisions. • To construct one's own values and standards rather than co-construct them. • To tolerate and accept conflict, conflicting points of view on an issue, or solutions without feeling that it threatens the interpersonal relationship. • To see conflict as part of relationships. 	<p>Supports:</p> <p>Meeting the expectations of valued others and evaluating <i>themselves</i> based upon what these other important people think of their ideas.</p> <ul style="list-style-type: none"> • Acceptance from colleagues will help these knowers feel recognized and safe in taking risks and sharing their own perspectives. • Evaluate their practice through writing. • Sharing their own perspectives in pairs or smaller groups of colleagues before sharing their perspectives with larger groups. • Differences of opinion will be experienced as being okay as long as colleagues remain connected and the interpersonal relationships are not jeopardized. <p>Challenges:</p> <p>Developing their <i>own</i> beliefs and values independent of what valued others think they <i>should</i> be thinking or doing; becoming less dependent on the approval of others.</p>	<p>Supports:</p> <ul style="list-style-type: none"> • Explicitly acknowledge others' beliefs and points of view. • Confirming and accepting these knowers' selves and their own beliefs. • Feeling known and accepted. <p>Challenges:</p> <ul style="list-style-type: none"> • Looking to oneself and one's own views in the relationship. • Constructing one's own values and standards rather than co-constructing them with mentors. • Tolerating and accepting conflict, conflicting points of view on an issue or solutions without feeling that it threatens the mentoring relationship. • Separating one's own feelings and responsibilities as distinct from the mentor's feelings. • Distinguishing one's own need to be accepted by the mentor.
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Self-Authoring	<p>Teaming for these knowers serves as a context in which they learn from other people's perspectives, outlooks, and opinions about teaching, practice, and school improvement. Teachers with this way of knowing will use the learning, ideas, and information that they glean from other team members to help themselves in their own self-understanding and improvement. These teachers internally evaluate suggestions, ideas, and perspectives offered by fellow teammates, and, if they assess them to be desirable, they will integrate these new ideas with their own. Unlike adults who are socializing knowers, these knowers experience conflict as a natural part of working in teams and learning from others</p>	<ul style="list-style-type: none"> • Understand varying perspectives as informing decision-making and the self. • Conflict is experienced as a natural part of dialog that can inform a decision-making or other process. • Internal focus on own value-generating system when making decisions. • Capacity to listen and attend to new ideas and points of view, multiple diverse perspectives, and to challenge new perspectives without feeling one's self to be at risk. • Focus on solutions that include a diversity of viewpoints and that will move the team's interests and goals forward. <p>Supports:</p> <ul style="list-style-type: none"> • Providing learning opportunities to learn, consider, and benefit from learning about diverse points of view; contexts for analyzing and critiquing proposals and or ideas; opportunities to explore their own self-determined goals. <p>Challenges:</p> <ul style="list-style-type: none"> • To be able to let go of one's own investment and identification with one's own standards and values—or to set them aside—and embrace/acknowledge values of other's that may be in opposition to one's own. • To embrace/accept different approaches to the process of exploring a problem or solving it that are not aligned with one's own way or approach. 	<ul style="list-style-type: none"> • Learning from the <i>process</i>. • Learning about their own capabilities and competencies. • Evaluating and critiquing their own practices, decisions, vision, and internally generated standards within the larger context of the school. • Emphasizing becoming more competent and extending one's own options in order to achieve their self-determined goals. • Inviting these knowers to create some of the structures enabling them to proceed with the process of collegial inquiry, (i.e., allowing them to demonstrate some of their competencies and providing some freedom within the structure of group conversations). • Conflict is experienced as a natural part of dialog that can help the group arrive at better solutions, more effective practice, and/or ideas for implementation. <p>Challenges:</p> <ul style="list-style-type: none"> • To be able to be less invested in their <i>own</i> identities, standards, points of view, and to become more open to and welcoming of standards, values, and points of view that are directly opposed to their own; to experience <i>themselves</i> as being process driven. 	<p>Supports:</p> <ul style="list-style-type: none"> • Providing opportunities to demonstrate one's own competencies. • Learning about diverse points of view. • Creating spaces in the mentoring relationship for analyzing and critiquing one's own work. • Providing information and practices that help them improve and move forward with their self-determined goals. <p>Challenges:</p> <ul style="list-style-type: none"> • Letting go of one's investment and identification with one's own understanding, or strategies without feeling internally conflicted. • Setting aside one's own standards for practice and or values and opening up to other people's values. • Acknowledging values of others that may be in direct opposition to one's own. • Accepting mentor's different approaches to the process of exploring a problem.
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Source: Parts of this table are adapted from Drago-Severson, E. (2004a). *Helping Teachers Learn: Principal Leadership for Adult Growth and Development*. Thousand Oaks, CA: Corwin Press.

For example, a teacher with an instrumental way of knowing is identified with his or her own concrete needs, desires, and self-interests and does not yet have the capacity to think abstractly or make generalizations. Instrumental knowers will be most concerned with following guidelines and established rules for how to work in a team. Adhering to rules enables them to know *how* to accomplish goals in “the right way.” For these adults, there is a causal relationship between their behaviors and consequences (e.g., if I work hard and follow the rules, I will get the “right” results and will be rewarded in a concrete and tangible way). Decisions are based on what the self will acquire. When making decisions with a team, they will rely heavily on rules to guide them in determining how things need to be done (i.e., the right way—in accordance with the rules). While instrumental knowers have a concrete orientation to the world and orient toward meeting their own concrete goals and interests, they should not be pejoratively understood as solipsistic. They are often very loving, kind and giving, but in a concrete manner (Drago-Severson, 2004b). Over time, teaming can help these knowers to think differently about their own and other people’s perspectives on teaching practices, proposals, student work, and other issues discussed in teams. Establishing clear expectations and guidelines for teamwork will help them feel supported. Teaming can also challenge these knowers to grow since it creates a space to learn about multiple perspectives through dialog. With encouragement, over time, these adults can grow beyond what they see as the “right answer” and toward open-ended discussion that could broaden their perspectives and stretch thinking.

A teacher with a socializing way of knowing has the capacity to think abstractly, to make generalizations, and to reflect on his or her own actions and the actions of others. However, a socializing knower is identified with his or her relationships with other people (e.g., authority figures, important friends, family, and supervisors) and/or societal expectations. Other people, especially authorities, are a socializing knower’s source of internal validation. Acceptance and approval from important others and/or meeting societal expectations is of ultimate importance. Conflict is experienced as a threat to the self. Socializing knowers do not yet have the capacity to take a stand for, or fully own, their work; they look to authorities for answers or solutions to problems. Although socializing knowers can feel internally when they have done something well, they need others to acknowledge and confirm their actions and views. Team members could encourage a socializing knower to think through the challenges of implementing new curricula, serve as mentors, or help her to see herself as an expert in a specific area or as someone capable of voicing and acting upon her *own* point of view. Working with colleagues

can offer these knowers a safe context for learning about diverse perspectives and for growing to understand that conflict in discussions can help team members grow and lead to enhanced decision making. Over time, teaming can help these teachers to develop the capacity to share their *own* perspectives on issues by looking internally for what they think, rather than looking to authorities for what they *should* think.

In contrast, a self-authoring knower has the capacity to take responsibility for her work and to look internally to her own set of guiding values when making decisions. A self-authoring team member might feel best supported if colleagues encouraged her to assume more responsibility and leadership within the team and/or school. A self-authoring knower is more likely to embrace opportunities asking her to take a stand for her beliefs and to exercise authority and demonstrate her competence, while considering classroom, organizational, or interpersonal issues. For self-authoring knowers, teaming provides a context for sharing internally generated perspectives and for learning from other perspectives and from *the process* of collaboration.

Ultimately, teaming represents not only an important resource for adult development, but also for enacting positive change. Over time, teaming can help teachers develop greater capacities to better manage the complexities inherent in professional and personal responsibilities and can support transformational learning—changes in ways of knowing.

Pillar #2: Providing Leadership Roles

Across all school types, but to different degrees, the principals discussed how teachers assumed leadership of groups within and outside of the school, or in curriculum development or school administration (e.g., department chairs or division directors). Leadership roles are undeniably related to the practice of teaming because working in teams affords opportunities for individuals to assume leadership roles. However, here I focus on the benefits of promoting the development of leadership in particular. I use the term “providing leadership roles” rather than the commonly used term “distributed leadership” because of the intention behind these roles. In contrast to assigning tasks, *providing leadership roles* offers supports and challenges to the faculty member so that he or she can develop.

About Leadership Roles

Research shows that inviting teachers to assume leadership within their schools supports teacher learning. For example, Zehr (2001), in dis-

curring results of the Institute for Educational Leadership report on teacher leadership, argues that it is critically important to increase leadership opportunities for teachers in schools. Zehr (2001) contends that often the only path for teachers to assume leadership is by becoming administrators, activists, or union organizers. However, he argues, principals should also support teacher leadership in curriculum development, budgeting, and selection of administrators.

Likewise, Leithwood, Jantzi, Ryan, & Steinbach (1997), who compared principal leadership to teacher leadership, advocate for creating school conditions that support teacher leadership. They found that teachers had the strongest influence on school planning and structure, while principals had a great impact on school culture and mission. They emphasize that teacher leadership builds democratic workplaces, increases teacher satisfaction and professionalism, stimulates organizational change and effectiveness, and promotes collegial interaction (Leithwood & Jantzi, 2002; Leithwood et al., 1997). To support teachers in leadership roles, Blase and Blase (2001) maintain that principals need to develop teachers' skills as data collectors, decision makers, and problem solvers; create opportunities for teachers to engage in dialog; build upon teachers' expertise in their disciplines and pedagogy; and join teachers as colleagues in the educational process.

Despite the many benefits that providing leadership roles affords, Leithwood et al. (1997) discovered that teacher leadership is often impeded by lack of time, training, and funding. They also pointed to "cultures of isolationism" that are oftentimes prevalent in schools that "inhibit the work of teacher leaders with their teaching colleagues" (p. 6). To ensure positive outcomes of providing leadership roles, school leaders need to cultivate support from teachers, parents, and school board representatives (Lieberman & Miller, 2001; Zehr, 2001). Positive outcomes are evident when school leaders share responsibility with teachers (Rallis & Goldring, 2000).

Examples of Principals' Practice of Providing Leadership Roles

It's critical to support teacher learning in a school, because I think that if teachers are alive and are growing, that's going to obviously energize the classroom. And as we ask our kids to keep developing and to keep learning, and to keep engaged and so forth, that teachers are models of doing the same kind of thing. (Mary Newman, Buckingham, Browne & Nichols)

Many principals in this study echoed Mary's sentiment above in depict-

ing leadership roles. Specifically, more than half of the principals serving across school contexts reported that leadership roles provide teachers (and themselves) with opportunities for transformational learning. Providing teachers with leadership roles, not unlike the practice of teaming, creates opportunities for them to build relationships with faculty, administrators, parents, and others in the school, and thus to strengthen the school community.

These principals invited teachers to assume leadership roles in many different ways. In nearly all instances, though, the principals remarked that these roles serve as opportunities to support teachers' learning. The following examples show a range of ways in which these principals provide leadership roles. Many principals explained that this practice not only fosters teacher growth, but also maximizes the potential of the human resources they have (for a detailed discussion, please see Drago-Severson, 2004a.).

Sharing Knowledge and Expertise: Knowledge-Based Management

Across school types and financial resource levels, principals remarked that teachers who share their expertise both within and outside of the school support individual and organizational learning. These roles also promote "self-discovery," and "independent learning," which, in the principals' views, are important for supporting growth and development.

More than half of these principals explained that they encourage teachers to deliver presentations on their work as models for other teachers to follow at national, regional, and local conferences. This, in their view, broadens teachers' perspectives by exchanging expertise with others in their field. Even the work of developing the proposal, whether independently or in a team, fosters the development of certain abilities, they explained. For example, Jerry Zank, leader of the Canterbury School in Fort Myers, Florida, encourages teachers to deliver presentations at conferences. He believes it is important for teachers to assume leadership in creating new goals and reaching beyond what they normally do. Encouraging teachers to write proposals and deliver presentations supports "self-reflection and self-education," which he sees as "key" to supporting learning. For Jerry, learning occurs when "we become active and engaged in a project when we own it, when it is ours. That's what really gets our juices going—when we talk to others about it, that's where you get the development."

At Trotter School in Boston, the teacher coordinators for the school's literacy program are trained at Lesley University. They then return to the school and lead the other teachers in implementing the ELLI (i.e., Early

Language and Literacy Initiative) program. In principal Joe Shea's view, the teachers gain "significant leadership" and learning by training other teachers in this program and observing and being observed as models. Joe refers to them as "lead" teachers and underscores that this type of leadership is now welcome in the culture of public schools.

Many principals report that encouraging faculty to deliver workshops to other faculty *within their own schools* provides an important opportunity to support learning. When they share their learning from conferences with a group of faculty, colleagues "push each other" in their thinking and practice by asking and responding to questions. The principals also stressed that often teachers do this on an individual basis, such as when they have read a book that they want to share with others.

Mentoring and Teaching Graduate Student Interns

Nearly one-third of the principals reported that teachers from their schools have leadership roles teaching graduate interns from local universities. Dr. Larry Myatt, principal of Fenway High School in Boston, like several other principals, has eight or nine teachers who serve annually as mentors to graduate student interns from local universities. Questions from the interns actually "push" mentor faculty "to think more deeply" about what they're doing and remind them "how hard it is to do what they do." Several teachers also teach courses at a nearby university. Larry believes that this experience supports their learning and is "beneficial to both new faculty and veteran faculty."

Teachers as Leaders in Technology

More than half of the principals, and nearly all of the principals serving in independent schools, discussed how they have allocated space in teachers' schedules for them to be what principal Barbara Chase of the Philips Andover Academy terms "leaders in technology" for their schools.

At Rye Country Day School, Scott Nelson shared that his school's laptop initiative has led to "a lot more faculty-driven professional development on that topic" and provided important leadership roles for teachers. A faculty committee developed the technology initiative, which conceptualized a long-range plan for how technology would be integrated into the school. Faculty "pioneers" with expertise in this area lead this professional development opportunity for the school by teaching other teachers and administrators, giving demonstrations, and conceptualizing the implementation of the program for teachers and students.

Similarly, at Canterbury School in Fort Myers, Florida, technology is a

key priority. Jerry Zank describes how faculty lead this program, set priorities (in collaboration with Jerry), and implement the program. In particular, faculty members have leadership roles in leading discussions in six different areas related to technology. For example, the technology coordinator had a lead role in introducing the “broad stroke sort of issues” to faculty and delivered a 45-minute demonstration. In Jerry’s view, this was “highly effective” as a learning opportunity for faculty leaders in the program and the entire school. He recalls, “People wanted to do it again.”

Authority for Decision Making

Across all school types, close to half of the principals explained that teachers assume leadership roles in examining, developing, and implementing new models for practice.

At Dr. Larry Myatt’s Fenway High School in Boston, Massachusetts, teachers assumed leadership roles in developing the new advisory program for students. Larry explained that advisory is now a key component of the school culture. The faculty in leadership roles needed to reflect on curricular questions, which Larry believed, supported their own growth, challenged their assumptions, and helped broaden their perspectives by learning from others.

Across school types and resource levels, principals reflected on how teachers in leadership roles support their own learning and also act as models for other teachers. For example, Scott Nelson, head of Rye Country Day School, discussed how a physical education teacher at his school initiated a program called *Hoops for Hearts* that combined science and physical education. This teacher, he said, became a “model for other [teachers] to follow,” a leader in his curricular field.

Leading Accreditation

Nearly one-half of the principals, across school types, reported that their teachers serve on accreditation teams, providing a leadership role as they visit and assess other schools. Teachers who lead these teams often bring new ideas and models back to their own schools, generating new ideas that are shared with faculty. For example, teachers at Sr. Judith Brady’s School, St. Barnabas High School in the Bronx, NY, have leadership roles in the school’s self study and follow-up implementation-for-change plan, “Accreditation for Growth.” Like other principals, Sr. Judith sees leadership roles as valuable opportunities for teachers to grow to “being leaders” within the school and the neighboring community (neighborhood

businesspeople also serve on these teams). These teachers “get people talking to each other” about changes in school structure, pedagogy, and curricula. Sr. Judith hopes that other teachers will also make a “habit of sharing information with each other” after seeing this modeled by the teachers in leadership roles.

Encouraging Teachers to Serve as External Experts

Like many of the other principals, Mrs. Deborah O’Neil encourages teachers from St. Peter’s to deliver workshops to other schools about portfolios, alternative assessment, and the writing process. Deborah explained that when other principals call to ask for one of her teachers to deliver a workshop at their schools, they say, “Can your sixth-grade teacher come out and do a workshop for my faculty because they’ll listen to another faculty person.”

Developmental Benefits of Providing Leadership Roles

Principals in this study echoed themes in literature related to the key benefits of providing leadership roles—opportunities for individuals to reflect on their own assumptions and beliefs. As mentioned earlier, leadership roles hold the potential for creating contexts within which adults can have their thinking supported and challenged by principals and colleagues. These conditions, the support of and challenging of another’s thinking, established by the provision of leadership roles potentially and ideally facilitate transformational learning. One goal of reflected practice is to stop events so they can be reviewed; the power is in the consideration of alternative, more effective ways of thinking and responding (Kegan & Lahey, 2001; Mezirow, 2000a). Once issues/questions are raised to a conscious level, we can take steps to address or re-think them. Yet, this is often lacking in schools because “teachers and administrators often do not consider how the assumptions that are foundational to particular forms of practice interact with new, innovative practices” (Kruse, 1997, p. 58).

As many of the principals explained above, working with others while thinking about how to direct a process creates additional opportunities for colleagues to support the leader as she comes to a greater awareness of her assumptions, and for her to possibly experiment with new ways of acting. In essence, these roles can create “holding environments” (Kegan, 1982) for growth, spaces where individuals have the opportunity to take greater perspective on aspects of their thinking and acting

(Kegan, 1994; Mezirow, 1991, 2000a). Risk-taking in a holding environment supports greater self-authorship, especially in an independent task or project.

As Table 3 shows, self-authoring knowers have internal standards that guide them through the decision-making process. To support leaders with this way of knowing would be to provide them with the freedom and authority to carry the project to completion, offering feedback as they evaluate their work, and sharing in their reflection upon that feedback. Support for socializing knowers could take the form of encouraging them to be more independent and to look to their own standards for making decisions, while explicitly scaffolding the steps toward this. A teacher who really does not want to assume a leadership role and is not ready for the challenge, may perceive the support offered as unhelpful or intimidating. Also important to note, a leadership role can serve as a holding environment for teachers making the transition between instrumental and socializing, and socializing and self-authoring ways of knowing.

Pillar #3: Collegial Inquiry

“Collegial inquiry” is an instance of reflective practice, which can occur in pairs or groups. I define collegial inquiry as a dialog that centers on reflecting on one’s assumptions and values as part of the learning process. It is widely accepted today that professional development must shift toward creating opportunities for teachers to reflect on their practice, their assumptions guiding practice, and how practice can be improved to better support learners’ success (Ball & Cohen, 1999; Darling-Hammond, 2003; Mezirow, 2000a; Kegan & Lahey, 2001; Wagner et al., 2006). Collegial inquiry provides opportunities to develop more complex perspectives by listening to and learning from others. The majority of the principals invite adults to engage in collegial inquiry, explaining that it encourages “self-analysis” and supports individual and organizational learning. I connect collegial inquiry to adult developmental principles that support teacher learning and discuss how it works, from the principals’ view. Like teaming and leadership roles, this practice is developmentally robust; it supports adults with different ways of knowing. Collegial inquiry takes different forms that include public discussion, private reflection, collaborative goal setting and evaluation, and engaging in conflict resolution.

About Collegial Inquiry and Reflective Practice

Reflective practice (Rasmussen 1999; Schön, 1987) aims to improve one's teaching and attends to teachers' emotional and intellectual growth (Brookfield, 1995; Osterman & Kottkamp, 2004) through the examination of assumptions. "In many ways," Brookfield (1995) writes, "we *are* our assumptions. Assumptions give meaning and purpose to who we are and what we do" (p. 2). Like Brookfield, other scholars in adult education mentioned earlier (Cranton, 1994, 1996; Lawler & King, 2003; Mezirow, 1991, 1994, 2000a; K. Taylor, 2000) focus on the critical importance of engaging in dialog and questioning our beliefs, assumptions, practices and behaviors in order to enhance adult learning and growth. For instance, Osterman and Kottkamp (2004) assert that reflective practice increases awareness and facilitates behavioral change by identifying problems, which can be challenging because assumptions are not always easy to articulate. Once a problem is identified, they suggest using multiple data sources to examine both cognitive and emotional aspects of behavior. "Engaging in critical self-reflection about our existing assumptions, values, and perspectives," as Taylor, Marienau and Fiddler (2000) maintain, "can further prompt our development" (p. 317).

Neuman and Simmons (2000), among others (Becerra-Fernandez & Stevenson, 2001), emphasize that principals should redistribute leadership to create a "joint mission, shared purpose, and common culture" (p. 10) by involving teachers in reflective practice, which they connect to student learning. Similarly, Cochran-Smith and Lytle (2001), like others (Darling-Hammond, 2003; McLaughlin & Zarrow, 2001) advocate for a "knowledge of practice" approach to professional development. This approach is infused by a core concept known as "inquiry as stance" on teaching (Cochran-Smith & Lytle, 2001, p. 48). They assert that "inquiry as stance" holds promise for the democratic purposes and practices of professional development. In a similar vein, Hackney and Henderson (1999) maintain that teachers need opportunities to reflect, since it ensures respect for diversity. Reflection, they explain, can then become the center of practice, "strengthened by the norms of collegiality and interdependence" (p. 67). This requires flexibility in leadership and structures *within the school* (Blase & Blase, 2001), including adequate time to meet and inclusion of faculty and staff in decision-making.

Examples of Principals' Use of Collegial Inquiry

The principals emphasized three reasons for collegial inquiry: It helped include others in leadership, to manage change, and to share and learn

from diverse perspectives. Nearly all of these principals believed time and space for this shared reflection was essential to teacher learning, though most sought more of it. Whether they launched collegial inquiry by inviting teachers to free-write, brainstorm, or engage in discussions in pairs, teams, or groups (sometimes before or after writing), they thought these practices supported growth. The majority of these principals created structures within their schools that were aimed at supporting their own and their teachers' risk taking and thinking. The principals employed collegial inquiry in four broad ways: reflection through writing, dialog and feedback, decision making, and consulting and/or research. I discuss the first two here.⁵

Reflection through Writing

A common theme that emerged from these principals—across school type and resource levels—was that writing was a tool for reflection and clarification of ideas, often taking the form of free writes, journaling, or proposal writing.

For example, Sr. Barbara Rogers, principal of Newton Country Day School of the Sacred Heart School, discussed how she creates contexts for teachers, administrators, and staff to engage in reflective practice, especially by inviting them to write about how they see the school mission in practice. Sr. Rogers creates opportunities for teachers to write privately and then collectively dialog about the ways in which their work connects to school goals and mission. This was common among many of the Catholic school principals. Sr. Rogers describes how this works:

We really ask each teacher to write a reflection on how he or she feels they've contributed to each of the goals of the school. . . . And one of the things I asked them to do is talk about what their own challenges are with regard to the goal. . . . Sometimes a person will write, as "I began to write about this, I saw [that] I don't do enough in this area. And . . . my goal for next year is to do X or Y or Z".

Sr. Rogers explained that this reflection is "mission-based" and that teachers value these conversations: "We all love the opportunity to talk about what's most important to us. . . . What's most important for faculty is they feel attended to so that they can attend fully to the children." Such contexts become an invitation to transformational learning.

Reflection through Dialog

These principals discussed how engaging in reflective practice provided a context to dialog about what is and is not working well for them and their students. Topics for reflection included developing accountability systems, integrating innovations, developing strategies to assess student achievement, developing a shared purpose, and improving literacy.

Some principals have found that in addition to attending to mission, collegial inquiry has enhanced the school's ability to assess their effectiveness. At the Punahou School, Jim Scott believes his school's professional development program is an opportunity to encourage dialogical teacher reflection. The school is now considering how it evaluates its program, not "just for quality control," but "to have that frequent and consistent and thoughtful feedback." For instance, teachers at Jim's school engage in collegial inquiry as they map the curricula. The purpose of curriculum mapping, Jim explained, is "to uncover some of these differences [in teaching and implementation] and promote an environment for discussion." He hopes that dialog related to curriculum mapping will help teachers learn about "inconsistencies" in their teaching and guide them toward change. He describes the faculty changes in thinking about their own development as an "unfreezing of some of the old assumptions about, we can't do this, can't do this." This dialog has been invigorating for teachers and the school by helping teachers to develop greater awareness and purposefulness, Jim explained.

Similarly, Mrs. Kathleen Perry of Lake Worth Community High School in West Palm Beach, Florida, comments on how these dialogs support adult learning:

It allows you to see maybe areas where you were not . . . as clear, [that] had not been as defined as possible [and] to make suggestions that would help the teacher to improve or help students to achieve. And in doing so . . . that's another way of keeping your own development going.

Jim Cavanaugh, principal of Watertown high school, emphasized that "being reflective about your practice is the key." Jim feels that teachers need a self-awareness that develops through dialog:

Self-knowledge is just so important . . . that's crucial to teach a child or a student how to ask, 'How do I know what I know? What are my strengths and my weaknesses? How do I build up one and capitalize on the other? What's my preferred learning style? How

do I take in information fast, how do I seek out information?’ Unless we’re explicit about that, and we’re modeling it ourselves, kids aren’t going to learn to be . . . lifelong learners. They’re not going to learn to be self-taught.

Additionally, Jim emphasizes that purposefulness models lifelong learning for students.

Another way in which many of the principals in the study encourage dialog is to shift the use of time in meetings from nuts-and-bolts issues to shared inquiry about larger, more important issues. Some of the principals reported that they also invest time in faculty meetings in developing strategies and ideas for improvement. About one-third of the principals also desired to move more of the routine information from faculty meetings to other forms of communication (e.g., email) in order to devote more time to “issues of substance,” such as collegial inquiry.

Faculty meetings have become opportunities for teachers and the principals to dialog about evaluation, advising, student achievement, teaching practice, and changes to the physical plant, for example. Deborah O’Neil of St. Peter’s School believes that dialog helps teachers develop greater purposefulness about their teaching. For her, it is essential that faculty meetings focus on what teachers are doing in their classrooms, so that they have opportunities to hear about each other’s practice.

Developmental Benefits of Collegial Inquiry

As mentioned earlier, several professional development practices in adult education also center on inviting adults to engage in dialog and reflection about their beliefs, practices, and assumptions. Kegan’s theory (1982, 1994) informs our understanding of *how* adults with different ways of knowing might experience collegial inquiry. Collegial inquiry can support the process of individual growth and serve as a holding environment. Ultimately, though, people’s ways of knowing will influence how they are able to make use of collegial inquiry.

As Table 3 shows, when engaging in collegial inquiry, instrumental knowers would feel supported in discussions that are structured and have step-by-step guidelines for engaging in the process with at least a few concrete objectives. They would likely focus on achieving concrete goals, rather than abstract purposes. Over time, however, engaging in discussion about their own and other people’s practices could help them to develop capacities to understand and evaluate themselves through another person’s perspective. Socializing knowers, who have the capacity to think abstractly, privilege acceptance from important others, adhere to

unquestioned doctrines, and avoid conflict and disagreement. They might not feel comfortable *initially* participating in collegial inquiry, because it requires them to put forth their ideas without knowing where authorities stand with respect to the issue under discussion. In other words, socializing knowers will inspect the environment for cues from valued others or authorities, rather than consulting their own set of standards. Encouraging them to look inside for their opinions *before* seeking cues from others would support their growth. In contrast, self-authoring knowers would likely feel very comfortable since they have the capacity to look internally to their own value system when voicing their views and experience conflict as a natural part of dialog. These adults might benefit from questioning their own ideas or considering colleagues' alternative theories.

Conflict and contradiction may emerge as part of collegial inquiry in order to arrive at the best solution, depending on context. To engage *most* effectively in this process, a person needs to have—and offer—a perspective on what he is hearing. Being aware of gaps or inconsistencies in one's own perspective helps incorporation of new and conflicting ideas (Brookfield, 1995; Mezirow, 2000a). When divergent solutions are offered, it is best if a person can be encouraged to see the helpful nature of conflict and the ways it can serve to clarify a solution. With an appropriate mix of support and challenge, a person engaging in collegial inquiry can develop the capacity to more fully engage in and benefit from this practice. By supporting and challenging a person's way of knowing, this practice can serve as a context for learning, and, over time, as a bridge from an instrumental to a socializing way of knowing and from a socializing to a self-authoring way of knowing, and beyond.

Pillar #4: Mentoring

Mentoring is necessarily related to the practices of teaming, providing teachers with leadership roles and engaging in collegial inquiry; engaging as a mentor is a leadership role and mentoring relationships create opportunities for perspective broadening and examination of assumptions. However, mentoring is different in three ways. First, mentoring creates leadership roles that are less public and formal; it offers leadership opportunities to adults who might prefer a more private setting. Second, mentoring is often employed to introduce new community members to the school, to increase their sense of belonging and ownership of the mission in social settings. Third, mentoring most often operates in one-on-

one relationships, though some programs have components of group mentoring. Working with mentors over time can offer a more personalized learning option.

I focus on how principals explained the ways in which mentoring helped teachers to broaden their perspectives, share expertise and leadership, and support their own learning. Many principals remarked that mentoring benefited mentees and mentors, who also grew as a result of the relationship. Mentoring enables adults to explore their own thinking and contradictions, enhancing self-development.

About Mentoring

Although mentoring is one of the oldest models for human development, only recently has research started to address it as a model for supporting teacher learning within schools (Saphier, Freedman, & Aschheim, 2001; Wollman-Bonilla, 1997). Mentoring is commonly defined in the K-12 professional development literature as the relationship between a veteran teacher and a less experienced one, with the former offering support, assistance with curriculum, and guidance in classroom management (Fagan & Walter, 1982; Galvez-Hjornevick, 1986; Wollman-Bonilla, 1997; Saphier et al., 2001). A mentor is traditionally conceived as a friend, a guide, and, above all else, a teacher (Collins, 1993; Merriam, 1983; Levinson & Levinson, 1996). Through this relationship, the mentee, usually younger, is expected to become more autonomous (Kram, 1983), feel more comfortable in his work life (Little, 1990), become more reflective (Darwin, 2000), and learn skills that will enhance his teaching and understanding of the organizational culture.

Several researchers see mentoring as one means of helping to resolve teacher attrition (Saphier et al., 2001). Pairing experienced teachers with new and seasoned teachers helps to make both feel “more comfortable and personally connected” (Pappano, 2001, p. L6). Joellen Killion (2000b) points out that “most teachers construct knowledge from their experiences, often sharing this private knowledge with no one” (p. 3). This knowledge is most often based on asking questions of oneself about classroom experiences. Killion believes that professional development can support this kind of analysis in a context of collaboration, to break teacher isolation. There is a call for developing a better understanding of how different mentoring programs work, how teachers experience them, and how school context can enhance mentoring relationships (Saphier et al. 2001).

Examples of Principals' Use of the Practice of Mentoring

Almost all of the principals in this study have mentoring programs, though the programs range from newly implemented to quite developed. Most programs are voluntary for teachers, except in the Boston and Florida public schools, where all first-year teachers are assigned mentors. Significantly, *all* principals sought to improve existing programs or to begin one.

Mentoring takes a myriad of forms, including pairing experienced teachers with new teachers or university interns, pairing teachers who have deep knowledge of school mission with other teachers, and group mentoring. The programs' purposes vary. Some focus on exchanging information, while others aim to provide emotional support to new *and* experienced teachers. Others focus on "mission spreading" or supporting graduate interns. Most often, experienced teachers volunteer or are "encouraged" to be mentors, but they are selected according to different criteria, such as understanding of the mission, experience, or disciplinary focus. For most of these principals, the philosophy behind mentoring was to share leadership, strengthen relationships within their schools, help adults to manage change and diversity, and of course, support teacher learning. In their view, mentoring relationships are an essential way for teachers to support one another, no matter if they are new or more experienced. Since one form of mentoring was very common across all school types and resource levels, I present a case example of this type of program here, rather than a range of shorter examples.⁶

A Case of Mentoring in an Associate Teachers Program

All school types in this sample had partnerships with local universities and built mentoring relationships between experienced teachers and graduate student interns. In this case, I describe how Dr. Sarah Levine designed and implemented an Associate Teachers Program at her school.

Laurent Daloz (1986, 1999) suggests that effective mentoring relationships attend to both person and context. The Associate Teachers Program at Sarah's school, like others in this study, seemed to do just that. Sarah valued mentoring in her hiring practices. "Even when we do hiring," she explained, "we look for people who have mentored before, supervised before, because that's a very helpful quality." Each semester, the Associate Teachers Program paired experienced teachers with newly hired teachers and local graduate students, who served as associate teachers in master teachers' classrooms. Mentor and associate teachers shared teaching responsibilities. Since they were in the same classroom through-

out the term, they observed and commented on each other's teaching, offering feedback and support. The mentor's role was to support and challenge the associate teacher, but Sarah believed this program offered opportunities to both mentors and mentees: "It gets teachers who are veterans to think about practice, to reflect, to explain and articulate practice. All those good things. It helps [the associates] to combine the theory that they're learning in the classrooms in the context of the live school setting." Although mentoring was time consuming for the mentor teachers, who conferred daily with the associate teachers, Sarah believed that the growth opportunities outweighed the challenges and constraints.

Supporting the growth and learning of associate teachers was needed, in Sarah's view, to create a context in which associates could share their thinking. Sarah and the upper- and lower-school division directors facilitated workshops for the mentors on how to offer support. Experienced teachers were encouraged to reflect through collegial inquiry with the associate teachers, Sarah, and Betty (a pseudonym), who was the director of the program. Sarah and the division directors also organized seminars and programs for both associate teachers and the experienced teachers. In these seminars, they taught and advised both experienced and associate teachers about effectively handling pedagogical and relational concerns. Twice a week, the other experienced teachers (mentors and those who were not participating in the Associate Teachers Program) also delivered seminars for associate teachers where experiences were shared and tested. These teachers were paid a small stipend to deliver a class on a particular issue. For example, one teacher presented two sessions on teaching elementary school science.

In addition, experienced teachers in this role received additional opportunities for the teacher to develop further as a leader. Sarah felt that one experienced teacher, Buddy (a pseudonym), had benefited greatly from this role. Buddy's preparation of several hands-on seminars on integrating computers into the classroom had "helped him get out of his classroom. It's helped other people see how creative he is." He was a "teacher of teachers."

Betty said that experienced teachers appeared to be learning much from the mentoring leadership role opportunity.

The mentor teachers are coming to me, on a very regular basis, saying, "Boy, am I learning a lot. I'm learning about teaching. I'm learning about what it is to be an adult in this school. I'm really reflecting on practice. I'm really thinking about interpersonal skills. I'm really learning as much as the associates are."

The associate teachers are in touch with the knowledge base that's out there, which the experienced teachers may not have encountered when they were in school, because so much has happened in the last few years.

As for the associates, Sarah explained, they “had some very expansive experiences, and we've turned out some wonderful teachers.” The Associate Teachers Program not only encouraged the faculty to take more responsibility for their work, but it has enabled the school community to “become more of a professional development school because we are in the business of teaching and training teachers.”

Developmental Benefits of Mentoring

Mentoring is a practice that holds the potential to help adults better manage the complexities of their work and life. It is also a practice that can support changes in a person's way of knowing, over time. In this relational practice, dialog—whether it centers on classroom practice, improving skills, or expressing vulnerabilities—is inherent. Mentoring relationships can be reciprocal, such that both individuals can become more aware of the assumptions that guide their actions. When participating in mentoring relationships, both mentor and mentee were often invited to share their thinking and reflections, the principals explained. In other words, a mentor is in a position to challenge the thinking of mentee supportively, and the mentee can help the mentor become more aware of her own assumptions.

Daloz (1986, 1999, 2000) applies Kegan's theory (1982, 1994) to the relational context of mentoring; he suggests that the mentoring relationship can serve as a “holding environment” (Kegan, 1982) for growth from one way of knowing to the next. In describing how this happens, Daloz (2000) explains that a mentor can support the person as he or she is currently making meaning and developing. Like K. Taylor (2000), Daloz (2000) suggests that a mentor can serve as a bridge for supporting growth by attending to a person's present developmental level, and by offering the necessary challenges and continuity for development. Mentoring relationships, which serve as “holding environments,” that are extremely supportive without sufficient challenge tend to be inadequately stimulating, and can lead to disconnection. In contrast, relationships that are overly challenging can feel threatening to adults and cause withdrawal.

If a person who is participating in a mentoring relationship displays signs of uneasiness or frustration, we might consider this frustration in

developmental terms to better support him. Discussing practice and solving problems in a mentoring relationship can support learning and growth, provided that a person is encouraged and supported in appropriate ways. The ability to work together in a mentoring relationship will likely be influenced by both the mentor's *and* the new teacher's way of knowing. Understanding how the mentee will experience the mentor's guidance depending on her way of knowing is an asset.

As Table 3 suggests, instrumental knowers would likely feel best supported in a mentoring relationship if there were clear expectations and established, concrete purposes and goals. Participating in a mentoring relationship could help these knowers to move beyond what they see as the "right way of doing things" or the "right answers," and toward open-ended discussion that could broaden their perspective. Socializing knowers may conceive of the mentoring relationship as an arena for receiving positive reinforcement and thus be threatened if the feedback on performance is perceived as critical or negative. A socializing knower would likely experience frustration when unable to participate fully if asked to provide her thinking about a problem, and would look to her mentor for his or her view about what *should* be done.

Teachers who are self-authoring knowers would likely experience the mentoring relationship as supportive if a mentor provided feedback as to how they might perform more effectively. They would then consider their mentor's feedback and decide what actions to take. These mentees are less concerned with pleasing a mentor and more concerned with meeting their own internally generated goals. They bring their *own* views and values to the relationship. Unlike socializing knowers, self-authoring knowers are able to establish boundaries with their mentors, provide their mentors with critical feedback to help them improve, and have internal authority over their work. Socializing knowers, however, can grow to develop these capacities provided that they have appropriate supports and challenges. Mentoring relationships can serve as holding environments for adults who make meaning in the transitional spaces where both an instrumental and socializing or a socializing and self-authoring way of knowing are operating. Mentoring, like the other three practices, is a robust practice, which can be a holding environment that supports and challenges adults with different ways of knowing.

SUMMARY AND IMPLICATIONS

Today's leadership challenges strain the energy and commitment of even the most dedicated leaders. Given the demands of leading in a nation with an increasingly diverse population, this research offers insight into

another way to accomplish important national goals. A developmental perspective can help principals in their roles as professional development leaders to more effectively support teacher learning and growth. In other words, it can help develop principals' capacities as professional *learning* leaders. Within any school—or organization for that matter—there will likely be developmental diversity—meaning that adults will have a wide range of ways of knowing that they bring to their work. This research offers practices that will help principals and other school leaders to better accommodate the different learning needs, preferences, and developmental diversity among teachers and other adults within the school. To enhance schools as fertile learning centers for both children and adults, principals need to recognize and attend to developmental diversity, in addition to the many other forms of diversity in schools. While I am suggesting that a developmental perspective will aid principals in responding better to teachers' needs and strengths, I am also urging principals to continue attending to and caring about other personal and contextual variables to best support adult learning. Helping principals to more effectively exercise leadership in support of teacher learning is directly tied to improving teaching and children's development and achievement.

This *learning-oriented model of school leadership* differs from other K-12 models of professional development because it centers on learning as a developmental process, the person as an active meaning maker, and the context as an enhancer to growth. It shows that teacher learning can be understood as more than the accumulation of facts, knowledge, and skills; it is a process of transformation, provided that appropriate supports and challenges are in place. The model is unique and innovative because it is informed by adult learning *and* constructive-developmental theories, thereby illuminating how these theories serve as bridges to enhance practice. The implementation of these four pillar practices can support teacher learning *and* development. This model extends Kegan's (1982, 1994, 2000) work by applying theoretical ideas to the practice of leadership in support to adult growth in schools and by illuminating the kinds of support and challenges that will facilitate growth for adults with different ways of knowing. In addition, this model sheds light on the developmental aspects of teacher learning and how principals can support this *in their schools*.

This *learning-oriented model* recognizes developmental diversity and offers four pillar practices that can support the process of growth for adults with different developmental orientations. Moreover, it helps us to consider the developmental match between the expectations of a school culture and an adult's capacity to meet such expectations. By illuminating the types of supports and challenges that can be embedded in each

practice to support growth, it holds great promise for supporting adult learning within schools and other organizations.

These pillar practices, strategies, and case examples combine to provide principals and other school leaders with a new way to enact their roles as professional development leaders and architects of learning communities. In their role as professional development leaders, principals not only need to make time and space for reflection and collaboration, but through implementation of these practices they can make reflection and dialog centerpieces of professional development. By participating in these practices, principals can model shared inquiry, an openness to and respect for diverse perspectives, a willingness to take risks, and attend more effectively to adults' differing needs. Implementation of the model will enable principals to share leadership, strengthen relationships, help adults manage change, and support adult learning. Adopting the model's developmental framework can help principals understand adults' thinking and behavior in new ways and equip them with effective supports and challenges that will help adults across ways of knowing to grow. This can enhance *how* principals serve as professional development leaders and primary adult educators.

Speaking practically, while a principal will eventually want to invite adults' participation in all four practices, he or she may want to implement one or two at a time with different pilot groups of teachers. Teachers and other adults may prefer specific practices, especially initially. Implementation of *even* one practice, however, can provide rich soil for learning and growth. This is true since each practice enables adults to meet regularly, examine their thinking and practices, and consider alternative, new ways of thinking and practicing. Another option is to employ several of the pillar practices and provide teachers with choices for participation. This and other kinds of individualization of the model honors teachers' preferences, learning needs, and developmental orientations. It can also empower them through choice. By participating in these practices over time, teachers will likely take ownership of the practices, and the practices can become an integral part of the school's fabric.

Across all school types and financial resource levels, these leaders, serving in Catholic, public, and independent schools implement four pillar practices—to different degrees—to support teacher learning: (1) teaming, (2) providing adults with opportunities for leadership roles, (3) engaging in collegial inquiry, and (4) mentoring. While nearly all of the principals employed many of these practices, they were implemented according to school context and the needs of faculty. These principals emphasized the importance of creating structures for teacher learning *within the school*, and attending to individual as well as collective needs.

Most principals, across school type, stressed open and honest communication in any of the practices and the need to give attention to individual's ideas. The four pillar practices of this learning-oriented model can be adapted and used effectively by leaders in different settings. Individual school context and culture *matter* when contemplating ways to adapt these practices to support greater collaboration and learning.

These four pillar practices are robust in two ways. First, they are practices that can support and challenge adults with different ways of knowing, which provides a good fit between adults' ways of knowing and the practices themselves. In essence, the practices serve as "holding environments" (Kegan, 1982) for growth. Second, different supports and challenges can be woven into the implementation of the practices to accommodate a diversity of ways of knowing (Drago-Severson, 2004a). For example, a principal may hold the well-intentioned belief that, "A good strong faculty is one where faculty are able to take on different perspectives. [Teachers] need to acknowledge various perspectives and feel free to express their own perspectives because they are all important to decision making." This kind of expectation, however, inadvertently places developmental demands on teachers' ways of knowing. Therefore, it is necessary to understand how teachers with different ways of knowing may experience it and offer supports and challenges that will enable them to grow to meet it.

More specifically, the principal quoted above, like many others, believes that it is important for faculty to share their perspectives and that attending to diverse perspectives enriches decision making and the school as a learning center. However, teachers who are instrumental knowers do not yet have the capacity to think abstractly and will orient toward concrete purposes and to satisfying their own needs in decision making. Support for these teachers would take the form of encouraging them to consider other people's perspectives and multiple solutions, rather than "one right way" to address an issue. On the other hand, socializing knowers might feel overwhelmed, initially, by the invitation to share their perspectives about issues under discussion, without first learning what valued others think *should* be done. They will orient toward decisions that they believe are aligned with the interests of important others, rather than satisfying their own needs. Encouraging them to look internally and share their own perspectives will support their growth process. Although they have the capacity to look internally for their perspectives, it is critical that authorities *explicitly acknowledge* their perspectives and decisions. Valued others can support socializing knowers by encouraging them to see themselves as having important perspectives to offer and capable of generating good decisions. Over time this kind of purposeful

and explicit encouragement and challenge can support growth. In contrast, self-authoring knowers will feel supported and validated when they are invited to share their *own* perspectives and demonstrate competency. Supporting their growth could take the form of encouraging them to consider perspectives that are diametrically opposed to their own.

All four pillar practices share common underlying developmental principles. Among these are that they center upon different forms of adult collaboration; create contexts in which adults can articulate thinking through writing, speaking, and acting; uncover assumptions and beliefs that guide thinking and actions; have opportunities to discuss ambiguities, contradictions, and faulty reasoning; envision alternative ways of thinking and behaving; and consider alternative points of view. Over time, engagement in these practices can support the movement of aspects of a person's thinking from being identified with it (or "subject to it") to taking a perspective on it (or "holding" it as object). In other words, these practices can support transformational learning, or growth of the mind.

Developmental theory helps us to understand the important distinction between leadership practices that aim to *inform* and those that aim to *transform*. Transformative practices take into account how a person *makes meaning* of the experience in order to grow from participation (Brookfield, 1995; Cranton, 1996; Kegan, 1994; Mezirow, 1991, 2000a; K. Taylor, 2000). Constructive-developmental theory (Kegan, 1982, 1994, 2000), in particular, helps us to see that the best way of thinking about supporting adult learning is similar to that which we employ in supporting the growth and development of children and youth. It helps us to understand how differences in behaviors and thinking are often related to differences in how a person *constructs* his experience and it provides us with a *language* to discuss development. It helps us to move away from labeling adults as "resistors," and toward the promise of creating developmentally appropriate supports and challenges for growth. It helps us to understand that there needs to be a *good match* between the demands of the environment and our capacities of mind. And, it helps us to recognize that what constitutes support for one individual may be overly challenging for another.

While there may be other reasons for differences among teachers' preferences for engagement in particular practices (e.g., age, educational background, career phase), leaders would be wise to consider the role of development and teachers' ways of knowing. The principals in this study enact their leadership in support of teacher learning by carefully attending to similarities and differences among teachers. Put simply, learning-oriented school leadership can help adults in schools to handle the

increasing complexities of leadership, learning, and teaching in the twenty-first century, and to grow.

In addition, as discussed, making stronger connections between the adult learning and adult development theories that inform professional development programs for adult educators with those shaped for K-12 educators holds great promise. These models, which are informed by adult learning theories, also offer new and valuable insights for conceptualizing, structuring, and assessing K-12 professional development programs (see e.g., Cranton & King, 2003; King, 2003; King & Lawler, 2003; Lawler & King, 2000; Marsick, 1998). The theories of adult learning and development informing these and my learning-oriented model illuminate the types of changes that can occur when adults learn, clarify *how* the process of learning can support different types of change, and help us to understand *how* to support changes in adults' skills, knowledge, behaviors, reflective capacities, and even meaning-making systems.

Principals who create professional learning opportunities that renew adults' passion for learning while intentionally attending to how they make meaning of their experiences will support adult growth and enhance teaching. This is essential to student success, the health of our schools and our teachers, and the vitality of principals. *Learning-oriented leadership* focuses on the developmental aspects of adult learning and how principals and other school leaders can support them. It holds great promise for helping us achieve these goals as we strive to meet the new and complex challenges of education and leadership today.

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Notes

1 I use *way of knowing*, *meaning-making system*, *epistemology*, and *developmental orientation* interchangeably.

2 A version of this section appears in different form in Drago-Severson (2002, 2004a).

3 I thank Kristina C. Pinto and Deborah Helsing for their assistance with early data analysis.

4 Some examples presented here appear in *different* form and in greater detail in Drago-Severson, 2004a.

- 5 For a fuller discussion, please see Drago-Severson (2004a).
- 6 For a detailed discussion of other types of mentoring, please see Drago-Severson (2004a).

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