Design Principles for Learner-Centered Schools:

Developing Professional Learning Communities to Improve Student Learning

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I. Introduction

In this fourth volume of *Design Principles for Learner-Centered Schools,* we focus on research-based principles for developing school-based professional learning communities to support student learning. Our work in this volume continues to be guided by the Design Principles for Learner Centered Schools and the Learner Centered School Model that we developed in our three previous volumes of *Design Principles*. As in previous volumes we present a set of principles that teachers and principals can use to guide their efforts to improve student learning by implementing systemic changes to create the conditions supporting the development of professional learning communities.

> **What is a Professional Learning Community?**
> Educators become members of a small group in order to collaboratively investigate how they can better achieve their goals of increased student achievement. These educators create an environment that fosters mutual cooperation, emotional support and personal growth as they work together to achieve what they cannot accomplish alone. material and human, are channeled into policies and practices that facilitate student learning.

We specifically draw from the research on professional learning communities by Shirley Hord (2004), *Learning together, leading together: Changing schools through professional learning communities*, and we highlight useful the reflective tools for school and district leaders seeking to develop skills in *Leading for Learning* developed by Michael Knapp (2003a, 2003b) and his colleagues at the Center for the Study of Teaching and Policy, and the work of Hall and Hord (2006) in their second edition of *Implementing change: Patterns, principles and potholes*. We conclude by reporting on the initiative to create professional learning communities undertaken by Harford County Public Schools.

From Principles to Practices

Dr. Hanne B. Mawhinney, who is pleased to continue to show how the research-based principles developed in the previous three volumes have been turned into effective practices, again edits this fourth volume of Design Principles for Learner-Centered Schools. In this volume again, descriptions are supported by examples of strategies that Maryland educators use in improving student learning. We are proud to feature the dissertation research of **Dr. Jacqueline B. Haas**, Superintendent of Harford County Public Schools, and a recent graduate of the College of Education at the University of Maryland, College Park on her district-wide initiative to develop school-based professional learning communities.

Connecting to the Maryland's Standards

In focusing on how educators can turn principles to practices we are also pleased to support the efforts of the Maryland State Department of Education by showing how the **Maryland Instructional Leadership Framework** can be used to provide guidance on effective practices of instructional leadership to principals and aspiring leaders, how **Maryland's Standards for Professional Development** can help guide the development of professional learning communities, and how the resources available from the **Maryland School Improvement** website can be used to support comprehensive school improvement planning.

Organization of This Report
This report is intended to be a resource for districts and schools seeking to develop professional learning communities that focus on improving student learning. In the report we outline five design principles that researchers have found to support the development of professional learning communities.

Complementing each principle are descriptions of

- essential tasks for leaders, and school and district actions;

- five ways that school and district leaders and teachers can turn the principle to practice, that point to relevant outcomes of the Maryland Instructional Leadership Framework, Maryland Professional Development Standards and strategies that can be used for further study taken from the mdk12 website: School Improvement Maryland.

We conclude the report by describing the Harford County Public School strategy to create professional learning communities, suggesting seven lessons that can be taken from the district's work.

Report Summary and Supporting CD-ROM
Our report is presented in both hard copy, and in a CD-ROM version. The CD-ROM of this fourth volume of *Design Principles for Learner Centered Schools: Developing Professional Learning Communities to Improve Student Learning* includes an extensive research report on the Harford County Public School model for developing professional learning communities.

II. Learner Centered Principles

Learner-Centered Principles of Instruction
In this volume we continue our original focus on providing research-based guidance for schools designing strategies that deepen the focus on student learning based on the learner centered approach to instruction identified by Karen Murphy and Patricia Alexander.

Learner Centered Principles of Instruction

Karen Murphy and Patricia Alexander identified five principles that should guide the design of instructional strategies to support student learning:
- learning involves increasing students' knowledge base
- motivation is a key factor in student learning
- students learn by strategically processing new information
- there are commonalities and differences in the way people learn and in the rate at which they learn
- social contexts affect learning

The Learner-Centered Principles: Their Value for Teachers and Teaching.

Leading for Learning

In our second edition of *Design Principles for Learner Centered Schools* we showed that Learner Centered schools have particular organizational structures and cultures that promote student learning. We identified five principles to guide the design of *Learner Centered Schools* based on the findings that researchers at the Center for the Study of Teaching and Policy at the University of Washington used in developing their *Leading for Learning Model.*

WHAT IS A LEARNER-CENTERED SCHOOL?

The work of administrators, faculty, and staff of the Learner-Centered School are guided by the following principles:
1. schools should focus on learning
2. schools should build professional learning opportunities
3. schools should engage the external environment to promote learning
4. school leadership should be distributed
5. there should be coherence in the school program.

Leading for Learning Sourcebook:
http://depts.washington.edu/ctpmail/PDFs/LforLSourcebook-02-03.pdf

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In this fourth edition we focus specifically on two principles of the Learner Centered School:

- ***Schools should build professional learning opportunities***

- ***School leadership should be distributed.***

In order to be enacted in school improvement processes, both of these principles demand new approaches to school leadership that focus on instruction.

Indeed, as we will show in this report, the development of professional learning communities requires new practices of instructional leadership; practices that distribute leadership in ways that researchers have found enhance teachers' collective efficacy beliefs, and, thereby, hold the potential to increase student achievement.

III. Maryland's Instructional Leadership Framework

In focusing on new approaches to instructional leadership we support the assumptions that guided the development of Maryland's *Instructional Leadership Framework.* The Framework describes outcomes expected of Maryland principals as they provide instructional leadership for their schools. It focuses on the content knowledge needed for school principals to be the leader of teaching learning in the school. It represents the most commonly accepted instructional leadership responsibilities according to respected practitioners, researchers, and theorists in the field of instructional leadership and continuous improvement.

Maryland Instructional Leadership Framework Outcomes

1. Facilitate the Development of a School Vision

2. Align All Aspects of a School Culture to Student and Adult Learning

3. Monitor the Alignment of Curriculum, Instruction, and Assessment

4. Improve Instructional Practices Through the Purposeful Observation and Evaluation of Teachers

5. Ensure the Regular Integration of Appropriate Assessments into Daily Classroom Instruction

6. Use Technology and Multiple Sources of Data to Improve Classroom Instruction

7. Provide Staff with Focused, Sustained, Research-based Professional Development

8. Engage All Community Stakeholders in a Shared Responsibility for Student and School Success

In this report we show how leaders seeking to create professional learning communities put into practice the indicators associated with the eight outcomes outlined in Maryland's Instructional Leadership Framework.

IV. Supporting High Quality Professional Development

We believe that high quality professional development must be a central feature in developing professional learning communities. We believe that learner centered principles can guide efforts to increase instructional capacity. In order to put these and other principles that focus specifically putting into practice strategies to develop professional learning communities we must ask a critical question: how can we help teachers develop instructional capacities to teach for meaning?

Colleen Seremet, Maryland's Assistant Superintendent for Instruction explains that the important pieces of a quality instructional program are: solid curriculum, a quality assessment program, and high quality teacher professional development:

Supporting High Quality Professional Development

This fourth volume of *Design Principles for Learner Centered Schools* is intended to be used as a resource to support the kind of embedded professional development opportunities for teachers specified in the Maryland Teacher Professional Development Standards focused on processes that are: data driven, used to inform planning, applying knowledge of teacher learning

> ***Colleen Seremet, Maryland's Assistant Superintendent for Instruction,*** reminds us: "Curriculum doesn't teach kids; assessment only measures how our students are doing. The real important element in quality instruction is always the teacher in every classroom."

and adult learning theory, and the standards focused on content of professional development that: deepen teachers' understanding of Maryland content standards and research based on best practices and appropriate assessment, enable them to apply research to decision making, ensures that teachers collaborate with colleagues, are able to meet learning needs of all students equitably, and are able to involve families in the processes (http://mdk12.org/instruction/professional_development/1).

V. BACKGROUND: Agenda for Increasing Student Achievement

The workplace of the 21st century will demand individuals who are knowledgeable and well trained, capable of complex thinking, and able to process information and to communicate orally and in writing. Americans will have to compete internationally in this workplace. Yet the performance of American students on an array of achievement tests, including the SAT, the NAEP tests of reading and mathematics, and TIMMS assessments, among others, suggests that many are not achieving necessary skills. In particular, students who are poor, disabled, or from racial or language minorities continue to perform below expectations.

The public schools are being asked to educate all students to high levels. State-level accountability initiatives have been common since the early 1990's and generally have included widespread student testing, public reporting of results, and the labeling of

schools as "effective" or "needing improvement." To meet accountability challenges, states, school districts and schools throughout the nation have been implementing a variety of reform strategies. By and large these strategies focus on ways to build the capacity of schools to provide good instruction so all students can learn. They include establishing uniform curriculum standards, innovative instructional practices, and common assessments and accountability and also include changes in the design of the school day and more focused and intentional professional development for teachers.

Focused and intensive statewide school reform in Maryland began in 1991 with the Maryland School Performance Program (MSPP), a comprehensive school accountability initiative. Annually, student performance on the state's assessment instrument, the Maryland School Performance Assessment Program (MSPAP), along with other test scores, attendance, and dropout statistics, was reported for every public school in the state. Schools were judged in terms of the proportion of students meeting the MSPAP performance standards, and rewards or sanctions were assigned accordingly.

In 2001, MSPP was terminated with the passage of landmark federal legislation, the *No Child Left Behind Act (NCLB)*. Based upon five goals, NCLB mandates annual testing and reporting of student performance and holds schools and districts accountable for regular increases in the proportion of students, in the aggregate and disaggregated by race, poverty, English language learning, and special education, who demonstrate proficiency in reading and mathematics. In addition, NCLB mandates a highly qualified teacher work force and schools that are safe and free from drugs and violence.

> ***Goals of NCLB:***
> 1. All students will demonstrate proficiency in reading and mathematics by 2013-014;
> 2. All students will demonstrate proficiency in English;
> 3. All students will be taught by highly-qualified teachers;
> 4. All students will graduate from high school;
> 5. All students will learn in schools that are safe and drug-free.

> ***Impact of NCLB***
> One estimate suggests that as many as 20,000 schools nationwide will be identified as "needing improvement" as a result of NCLB (Susan Neuman, 2003).

The ambitious performance standards of NCLB have raised public expectations for student achievement along with concerns that the public schools may not, as they are currently constituted, be able to meet those expectations within the ambitious time frame mandated by the legislation.

Because of NCLB, Knapp and his colleagues (2003a) have observed, "a sense of urgency pervades public education these days as students struggle to meet the high standards set by their state and the nation."

A New Focus on Teacher Professional Learning

Maryland has responded to NCLB with a new accountability program based upon new curriculum standards, a comprehensive Voluntary State Curriculum, and student achievement tests. Across the state, district leaders recognized that higher student performance standards and new state-mandated curriculum posed challenges to all teachers and particularly to inexperienced and less-prepared teachers.

Maryland State Department of Education and Maryland school district leaders recognized that teacher effectiveness is the key to meeting those challenges. A growing body of evidence supports a strong relationship between teacher behavior and student learning.

The research suggests that the most powerful way to improve student learning is to improve teacher performance.

Some researchers have gone so far as to assert:

> *Of the inputs which are potentially policy-controllable, analysis indicates quite clearly that improving the quality of teachers in the classroom will do more for students who are most educationally at risk . . . than reducing the class size or improving the capital stock by any reasonable margin which would be available to policy makers (Strauss & Sawyer, 1986).*

Colleen Seremet, Maryland's Assistant State Superintendent for Instruction says "the rubber will really hit the road when we are able to ensure that every teacher has the knowledge and skills they need to deliver an exemplary curriculum to meet the various needs of all the students in every school around the state" (School Improvement in Maryland, Teaching and Assessing, (http://mdk12.org/instruction/index.html)

Factors Influencing Effective Teaching

Research also confirms that teachers' abilities to effectively teach all students depend upon both personal and organizational factors. Among the former are verbal ability, knowledge of subject and teaching, and classroom experience. Among the latter are

- the "fit" between teaching assignment and teacher knowledge, and
- school conditions, including class size, pupil load, planning time, opportunities to plan with colleagues, and
- availability of appropriate materials and equipment. (Linda Darling-Hammond, 1999).

Other researchers agree that teacher education, ability, and experience are consistently associated with increases in student achievement across all schools and districts. Some have argued that spending on teacher education is in fact the most productive investment for schools.

What Distinguishes Effective and Ineffective Teachers?
Linda Darling-Hammond (1999) reports that "a substantial portion" of the differences between effective and ineffective schools is attributable to differences between teachers—in ability (especially verbal skills), in content preparation (especially for math and science), in teaching (pedagogical) skill, and in experience.

If schools and districts are to make a productive investment, what kinds of training and education have the greatest potential for improving student learning?

Research suggests that effective teachers have learned to use skillfully a variety of teaching strategies to fit the needs of students and the demands of instruction. Mastering those strategies and using them intentionally and appropriately requires training and practice, and teachers who have had formal training and experience in the classroom are better able to select and apply teaching techniques that foster high-level learning among all students.

Maryland Teacher Professional Development Standards

Research also suggests that effective teacher professional development is crucial to improving student achievement.

Recognizing this, Maryland has created the *Maryland Teacher Professional Development Standards.* The four elements identified in the Maryland Teacher Professional Development Standards are derived from the National Staff Development Council's (NSDC) Standards for Staff Development. Like the NSDC standards, the Maryland Teacher Professional Development Standards rest on four fundamental assumptions about contextual factors that are critical to ensuring that professional development is effective.

> **Assumptions Guiding Maryland's Teacher Professional Development Standards**
>
> - *Professional development is most effective when it takes place in vibrant professional learning communities*
>
> - *Professional development is most effective when there are strong leaders.*
>
> - *Professional development is most effective when there are adequate resources.*
>
> - *Professional development is most effective when there is consensus around clear expectations for what teachers should know and be able to do to help all students learn.*
>
> (http://mdk12.org/instruction/professional_development/teachers_standards.html)

The first assumption guiding the development of the Standards is that:

Professional development is most effective when it takes place in vibrant professional learning communities

Why is this so? Evidence from the broad body of research consulted in developing the Framework suggests:

Learning communities take various forms, but they all

- *value ongoing learning by teachers and students,*

- *encourage individual and collaborative experimentation, practice, and reflection,*

- *foster collegiality and problem solving, and*

- *emphasize continuous improvement in classrooms and schools.*

VI. Creating a Professional Learning Community

Researchers report that workplace conditions and workplace culture are powerful influences on teachers' practice, and consequently on student outcomes (Darling-Hammond, 2002; Hall & Hord, 2001; Hord, 2000; Morrissey, 2000). Shirley Hord program manager for the Southeast Educational Development Laboratory's research project *Strategies for Increasing School Success* (SISS) has found that "Teacher development is the flip

> Creating a professional learning community requires staff time for:
> - planning,
> - communication, and
> - collaboration

side of the coin of school change. Unless teachers become more effective at what they're doing, schools will not improve." (Morrissey, 1999, http://www.sedl.org/pubs/sedletter/v11n02/renewing.html)

Other researchers agree that educators can expect little change in the teaching/learning process unless they pay more attention to the ways in which teachers learn together and do their work. Linda Darling Hammond (1998) advocates investing in strategies that would strengthen teachers' knowledge base, developing their capacity to make decisions, and giving them autonomy to improve the profession.

What is a Professional Learning Community?

The term professional learning community (PLC) describes a school that operates in a way that engages the entire group of professionals in coming together for learning within a supportive, self-created community. In these settings the participants, comprised of teachers and administrators, come together to interact, test their ideas, challenge their inferences and interpretations, and process new information with each other.

> When new ideas are processed in interaction with others, multiple sources of knowledge and expertise expand and test the new concepts as part of the learning experience. The professional learning community provides a setting that is richer and more stimulating. (Morrissey, 2000, p. 3)

Improvement of the Teaching and Learning Process Lies at the Heart of the PLC

Morrissey (1999) explains that the teaching and learning process can improve and teachers can become more professional when school staffs transform themselves into professional learning communities (PLCs), sometimes called communities of continuous inquiry and improvement. Staffs who become professional learning communities:

- *continuously seek and share learning, and act on their learning*,

- *examine conditions that have an impact on student results,*

- *assist one another in evaluating the effectiveness of strategies and techniques, and*

- *make informed decisions to increase student learning.*

Morrissey and her colleagues find that such interactions support improvement of the teacher-student relationship as well as give teachers the courage to try new tactics and provide a way for them to work through problems associated with changes in practice. (Morrissey, 1999, http://www.sedl.org/pubs/sedletter/v11n02/renewing.html)

Characteristics of Professional Learning Communities

Shirley Hord found that schools operating as PLCs share five characteristics. In these schools there was evidence of:

- *supportive and shared leadership,*

- *collective learning,*

- *shared values and vision,*

- *supportive conditions in human and physical resources, and*

- *shared personal practice.*

Other researchers have identified similar characteristics of schools operating as PLCs; however, we are only beginning to understand how these conditions are developed. Hord and her colleagues have created a survey instrument, the *School as a Learning Organization* survey, which can be used to assess the extent to which teachers perceive the conditions supporting each of the five characteristics essential to the development of professional learning are present in their schools. In our discussions of the five principles for creating professional learning communities we outline next, we reference particular questions from the SLO survey that faculty should ask when assessing what they need to do to become a PLC.

Overview of Design Principles for Developing PLCs

In the next section of this report, we outline ways in which five characteristics of PLCs can be developed.

1. We first outline the principles that frame the practices of teachers and principals associated with each characteristic.

2. We describe essential tasks for leaders, and school and district actions that should be taken in support of the principle.

3. We then provide five ways that school and district leaders and teachers can turn the principle to practice.

    a. First we identify questions posed in the School as Learning Organization survey that staff schools that are actively involved in continuous improvement can use to guide the self-assessment process.

    b. We then outline reflective questions that can be used to guide exploration of conditions supporting the particular principle for developing professional learning communities.

    c. Third, we identify indicators of the outcomes of the Maryland Instructional Leadership Framework that can be addressed when the principle is enacted.

    d. Fourth, we suggest indicators associated with the Maryland's Professional Development Standards that are also addressed when the principle is enacted.

    e. Finally, we suggest ways in which school and district leaders and staff can use the mdk12 website, School Improvement Maryland, to guide their learning to put the principle into practice.

VII. DESIGN PRINCIPLES: Creating Professional Learning Communities

DESIGN PRINCIPLE ONE: Develop Shared Values and Vision

> *Shared values and vision reflects the staff's unswerving commitment to student's learning, which is referenced for the staff's work (Hall & Hord, 2005, p. 26).*

A fundamental characteristic of a PLC is its strong and unwavering focus on student learning. Hord defined a shared vision as a strong mental image of what is important to the individuals and the organization (Hall & Hord, 2001; Hord, 1997; Hord, 2004).

The shared values and vision guide staff and leadership decisions about teaching and learning, and support norms and behaviors in the school and district community. The values and vision are embedded in the daily actions of teachers and administrators. Although staff members are encouraged to get involved in defining and sustaining the vision, they hold themselves responsible for making all decisions on the basis of the vision and values. School or district leadership is responsible to repeatedly communicate and sustain the vision throughout the organization.

> In an organization that functions as a PLC, the common good is, as stated by Hord (2004), "on a par with personal ambition" (p. 9).

Essential Tasks for Leaders in Developing Shared Values and Vision

The essential tasks for leaders in establishing a focus on learning include:

- *Making learning a central focus of work*

- *Articulating core values and norms that focus on powerful, equitable learning*

- *Consistently communicating that student learning is the shared mission of students, teachers, administrators, and the community*

This requires that leaders articulate core values that support a focus on powerful equitable learning. In order to do so, however, leaders must first have a clear understanding of their own core values about learning. As we suggest next, this requires that leaders at every level reflect on their own core values about learning.

Core Values and Norms About Learning

In order to build consensus around the need for improvement and to take action to develop PLCs leaders must consider their own core values and about learning. Indeed one of the key tasks of leadership is to develop an educational platform founded upon values that form the basis of leadership action. Those seeking to lead schools must examine their own stance toward a set of values that have been articulated by leaders who seek to create a foundation of core values and norms about learning that are the foundation for improved teaching and learning. For example, Knapp (2003a, p. 16) and his colleagues described values identified by researchers who examined the moral dimensions of leading as including the following:

Ambitious standards for student learning. A high level of understanding and skills in critical area of learning is essential in improvement efforts.

Belief in human capacity. Students and professionals can meet ambitious learning standards if they have effective instruction and support.

Commitment to equity. Achievement gaps among students who differ by class, race, ethnicity, and language must be narrowed and ultimately eliminated.

Belief in professional support and responsibility. Teachers and administrators must share responsibility and hold one another accountable for improving educational quality and equity.

Commitment to inquiry. Using evidence to evaluate and change practice is essential to continuous improvement of teaching and learning.

School Staff Actions to Develop Shared Values and Vision
In order to develop shared values and vision of learning and teaching, principals, teacher leaders, mentors and coaches

- Work with teachers and others to set goals for learning improvement, and then review progress

- Establish teaching and learning as central topics for school-wide faculty meetings.

- Initiate and guide conversations about student learning. (Knapp et al., 2003a)

District Actions to Develop Shared Values and Vision
District administrators and professional development staff develop shared values and vision by

- Establishing procedures for collecting data about student learning and regularly sharing it with school staff

- Selecting and developing assessment instruments that are aligned with high standards for student learning.

- Communicating frequently about student learning to parents, the community, and media

- Making student learning a primary reference point for decision-making and resource allocation. (Knapp et al., 2003a)

From Principles to Practices of Developing Shared Values and Vision

1. Assess Shared Vision and Values

One of the best ways for staff to become involved in defining and sustaining the vision that supports the school as a learning organization is to engage in a collective assessment of staff answers to the following questions:

- *Are visions for improvement discussed by the entire staff such that consensus and a shared vision results?*

- *Are visions for improvement always focused on students and teaching and learning?*

- *Do visions for improvement target high quality learning experiences for all students?*

2. Reflect on Conditions Supporting Shared Values and Vision

Study groups can use staff assessments of the extent of shared vision and values to reflect on the following questions Knapp (2003a) and his colleagues (p. 15):

- How is learning defined and demonstrated in your school or district? How is learning distinguished from test performance?

- What values do leaders share in your school or district, and how do they support a focus on learning? How are these values demonstrated?

3. Maryland Instructional Leadership Outcomes Addressed by Developing Shared Values and Vision

Instructional Leadership Outcome	Evidence in Practice
1. Facilitate the Development of a School Vision	The principal is able to demonstrate that there is/are: 1.1 A written school vision that encompasses values, challenges, and opportunities for the academic, social, and emotional development of each student 1.2 A process for ensuring that all staff and other stakeholders are able to articulate the vision 1.3 Procedures in place for the periodic, collaborative review of the vision by stakeholders 1.4 Resources aligned to support the vision

4. Maryland's Standards for Teacher Professional Development Addressed by Developing Shared Values and Vision

We believe that schools that follow our research-based suggestions for developing shared values and vision are well on their way to meeting most of the indicators associated with Standards 4 and 5, of Maryland's *Standards for Teacher Professional Development* focused specifically on teacher understanding of diverse learning needs and student learning environments

Standard 4: Diverse learning needs
Effective professional development ensures that all teachers have the knowledge, skills, and dispositions to meet the diverse learning needs of all of their students.

4a. Professional development focuses on developing teachers' understanding of and disposition to acknowledge the diversity of student learning styles and needs.

4b. Professional development provides opportunities for teachers to develop and demonstrate the knowledge and skills necessary to design and implement instructional and assessment strategies that meet diverse student learning needs and help all students master Maryland content standards.

4c. Professional development fosters teachers' respect for all students and guides teachers in setting and maintaining high expectations for all students to demonstrate proficiency on Maryland content standards.

Standard 5: Student learning environments
Effective professional development ensures that all teachers are able to create safe, secure, and supportive learning environments for all students

5a. Professional development fosters a safe, inclusive, equitable learning community where teachers, administrators and students participate in maintaining a climate of caring and respect.

5b. Professional development provides opportunities for teachers to develop and practice student ownership of management routines and practice creative solutions to conflicts.

5c. Professional development provides opportunities for teachers to use data on student behavior such a discipline referrals, suspension information and school climate surveys to analyze and refine practices that promote optimal learning environments

5. Develop Shared Values and Vision Using mdk12 Website
For follow up study look at the **Process of Creating a Vision** in School Improvement
Maryland (http://mdk12.org/process/leading/principals_role.html):

> *When researching successful leaders, Deal and Peterson reported, "We found a clear and focused sense of values to be a critical factor among successful principals we studied." Robert Eaker adds, "Monitoring or paying attention is a key vehicle for communicating the values of the school. Monitoring will only be truly effective when the school's key values become the focus of monitoring efforts." He further points out that "Modeling is the way leaders 'advertise' their personal values—and the central values around which the organization operates. All too often school officials espouse certain ideals and beliefs but then pay attention to other things. Students and faculty learn what is truly valued in a school by observing what school leaders pay attention to."*

Consequently, any assessment of a principal's effectiveness in communicating values should include the following questions:

1. What does the principal plan for?

2. What does the principal monitor?

3. What does the principal model?

4. What does the principal reinforce through recognition and celebration?

5. What behavior is the principal willing to confront?

DESIGN PRINCIPLE TWO: Engage in Collective Learning and its Application

> *Collegial learning provides the means for enabling the culture of educational change (Hall & Hord, 2005, p. 30).*

Professional learning communities engage school staff in processes that collectively seek new knowledge and processes. Problems are addressed through the collegial relationships and investigations that promote new knowledge and learning that can be applied to the day-to-day issues of student learning in the classroom (Morrissey, 2000). Schools that operate with this form of PLCs go far beyond issues of schedule, discipline, and fund raising to address the issues at the core of their mission – student learning. "Such collaborative work is grounded in *reflective dialogue* or *inquiry*, where staff conduct conversations about students and teaching and learning, identifying related issues and problems" (Hord, 2004, p. 9). The inquiries inherent in this culture allow teachers and administrators to apply new information to problem solving and therefore work to provide new conditions for

> By supporting individual members, organizational learning can offer a very promising avenue to more successful change processes. (Hall & Hord, 2005, p. 31).

addressing the needs of students. In these environments educators apply the most effective pedagogy to the instruction of their students and take responsibility for the learning of each and every student (Morrissey, 2000).

This kind of organizational culture fosters:

- Mutual respect and regard,

- High levels of trust, and

- Innovative solutions to problems

Essential Tasks for Leaders in Engaging in Collaborative Learning

The essential tasks for leaders in fostering collaborative learning and its application are:

- *Modeling, guiding, and facilitating participation in professional communities that value learning.*

- *Building trusting relationships among professionals in the school or district.*

- *Promoting a focus on learning and associated values*

- *Supporting conversations among staff with the physical conditions necessary for staff to meet: time, a location* (Knapp et al., 2003a)

School Staff Actions to Engage in Collaborative Learning

In order to engage in collaborative learning and teaching, principals, teacher leaders, mentors and coaches

- Create structures for regular staff interaction about learning and teaching.

- Set up cycles of school-wide inquiry into learning and teaching performance

- Identify and address staff assumptions about norms, values, and beliefs related to learning.

- Celebrate accomplishments and teacher learning

- Attend to the emotional and interpersonal needs and skills of the participants

- Develop skills of the staff in active listening, setting aside assumptions while in conversation, and trying to understand each other's comments and making meaning of them. (Knapp et al., 2003a, p. 17)

> Collaborative learning flourishes in an organizational culture where individuals engage in meaningful conversations to articulate their shared system of beliefs, explanations and values
>
> (Hall & Hord, 2005, p. 32)

District Actions to Support Engagement in Collaborative Learning

District administrators and professional development staff support engagement in collaborative learning and its application by:

- Supporting schedule changes that enable staff to work together.

- Working with the union to establish provisions for collaborative work among teachers.

- Redefining the work of the central office staff in terms of its relationship to learning improvement

- Guiding a process of inquiry into district wide organization and performance.

- Taking part in professional learning activities with colleagues. (Knapp et al., 2003a, p. 17)

> Skills for operating as a professional learning community must be developed across the entire staff, otherwise the PLC will not be productive. This suggests that the central office staff has roles to play in developing the capacity of campus-based administrators and teachers to work collaboratively.
>
> (Hall & Hord, 2005, p. 33)

From Principles to Practices of Creating Engagement in Collective Learning

1. Assess Extent of Engagement in Collective Learning

One of the best ways for staff to become engaged in collaborative learning and application of the learning's (taking action) create high intellectual learning tasks and solutions to address student needs is to engage in a collective assessment of staff answers to the following questions:

- *Does the entire staff meet to discuss issues, share information, and learn with and from each other?*

- *Does the staff meet regularly and frequently on substantive student-centered educational issues?*

- *Does the staff discuss the quality of their teaching and students' learning?*

- *Based on their learning's, does the staff make and implement plans that address students' needs, more effective teaching, and more successful student learning?*

- *Does the staff debrief and assess the impact of their actions and makes revisions?*

2. Reflect on Conditions Supporting Collective Learning

Study groups can use staff assessments of the extent of collective learning to reflect on the following questions posed by Knapp (2003a) and his colleagues (p. 17-18):

- How focused on learning is the culture of your district, school, or other working group?

- What could you or others do to make learning a more important part of your work culture?

- To what extent does staff have conversations about teaching and learning where new ideas are voiced and information used in problem solving and in collective decision-making?

- To what extent to staff able to engage in conversations characterized by active listening?

- How do you and other leaders interact with colleagues? How can you build trust, and mutual listening into these relationships… and use them to promote collegial learning?

3. Maryland Instructional Leadership Outcomes Addressed by Collective Learning and Application

Instructional Leadership Outcome	Evidence in Practice
2. Align All Aspects of a School Culture to Student and Adult Learning	The principal is able to demonstrate that there is/are: 2.1 Mutual respect, teamwork, and trust in dealings with students, staff, and parents 2.2 High expectations for all students and teachers in a culture of continuous improvement 2.3 An effective school leadership team 2.4 Effective professional learning communities aligned with the school improvement plan, focused on results, and characterized by collective responsibility for instructional planning and student learning 2.5 Opportunities for leadership and collaborative decision making distributed among stakeholders, especially teachers
7. Provide Staff with Focused, Sustained, Research-based Professional Development	The principal is able to demonstrate that there is/are: 7.1 Results-oriented professional development that is aligned with identified curricular, instructional, and assessment needs and is connected to school improvement goals 7.2 Opportunities for teachers to engage in collaborative planning and critical reflection during the regular school day (job-embedded) 7.3 Differentiated professional development according to career stages, needs of staff, and student performance 7.4 Personal involvement in professional development activities 7.5 Professional development aligned with the Maryland Teacher Professional Development Standards

4. Maryland's Standards for Teacher Professional Development Addressed by Collective Learning and it Application

We believe that schools that follow our research-based suggestions for developing collective learning are well on their way to meeting most of the indicators associated with Standards 2, 3 and 7 of Maryland's *Standards for Teacher Professional Development* focused specifically on research based, data-driven collaboration.

Standard 2: Research-based

Effective professional development ensures that all teachers have the knowledge, skills, and dispositions to apply research to decision making.

 2a. Professional development includes ongoing opportunities for teachers to read and reflect on current research on topics of interest to them and consistent with state and local school improvement priorities.

 2b. Professional development may involve two-way interactions with researchers to discuss research design, data collection, analysis, and reporting to assist teachers in understanding what works, particularly in areas where there may be competing perspectives and conclusions.

 2c. Professional development involves individual teachers or teams of teachers, often in collaboration with researchers, in action research to test their own hypotheses and to report the results about professional development program impact or the effectiveness of particular instructional strategies and programs for teachers and students.

Standard 3: Collaboration

Effective professional development ensures that teachers have the knowledge, skills, and dispositions to collaborate with others to improve instruction.

 3.a Professional development provides ongoing opportunities for teachers to practice working with colleagues, including other teachers, principals, counselors, social workers, and others, and emphasizes that collaboration is a means and not an end in addressing issues related to school improvement and improved student learning.

 3.b. Professional development emphasizes constructive management of conflict and fosters understanding that disagreement and conflict are potentially beneficial elements of professional discourse.

 3.c Professional development relies on communication technologies to broaden the scope of collaboration.

Standard 7: Data-driven

Effective teacher professional development relies on rigorous analysis of data.

 7a. Individuals who plan professional development have ready access to high-quality student data from various sources that are organized in user-friendly formats.

 7b. Individuals who plan professional development have the knowledge and skills necessary to use disaggregated student data (by race, gender, English language learners, special education, and eligibility for free or reduced price meals) for planning, implementation, and evaluation of professional development and instructional programs.

 7c. School and district schedules set aside time for teachers and others to examine student data as the starting point for planning professional development.

 7d. Individuals who plan professional development carefully analyze a variety of disaggregated student data to identify gaps between student learning and standards for proficiency to inform the choice of the content of professional development.

 7e. As appropriate to school and district needs, data analysis focuses on results from approved national, state, and local assessments, as well as student work samples and portfolios, and behavioral indicators such as attendance and disciplinary referrals.

5. Develop Collective Learning Using mdk12 Website

For follow up study look at the **Process of Organizing a School Improvement Team** in School Improvement Maryland (http://mdk12.org/process/leading/sit.html)

A School Improvement Team functions best in a supportive and enabling culture committed to enhanced achievement for all students. The nature of School Improvement Teams, School-Based Decision-Making, and participative management is that decisions will be made at the local site by those performing the functions.
Use the score sheets on the School Improvement Maryland to assess how well your current team is displaying recommended traits, attitudes, and skills that an effective School Improvement Team (SIT) should posses.

Engage the staff in the activities in the School Improvement Maryland online course:
Using Data to Improve Student Achievement
(http://mdk12.org/data/course/index.html)

Using Data to Improve Student Achievement is online staff development that supports principals in leading their school's improvement efforts through data-driven instructional decisions. The four modules focus on the competencies that principals need to develop in order to use data effectively to improve student achievement. Each module is organized around workshops that identify an authentic performance the principal needs to effectively lead and a sequence of background knowledge and practice activities that lead to that performance.

Staff seeking to engage in collective learning can form study groups to work on the four modules:

- *Understanding Maryland's standards for schools and the process for achieving them.*

- *Using state data to inform school improvement planning*

- *Using school data to clarify and address your problem*

- *Using classroom data to monitor individual student progress.*

DESIGN PRINCIPLE THREE: Develop Supportive and Shared Leadership

If a school staff is working collaboratively and making decisions, the role of the principal remains a highly significant one, with the principal participating with the staff as a learner and contributing democratically to decision-making. (Hord & Hall, 2005, p. 27).

Hord (2004) found that transforming a school into PLCs required that the administrative leadership work to transform all staff into a learning community by nurturing the staff's development into the concept of a community. The transformation of a school into a PLC requires that the traditional view of the principal be set aside in favor of more distributed leadership and joint learning with the staff and administration equally engaged.

Within a school PLC, it is important that all staff work and grow together to achieve jointly defined learning goals for staff and students. Administrators, along with teachers, must be learners:

- questioning,

- investigating, and

- seeking solutions for school improvement and increased student achievement" (Hord, 2004, p. 8).

Hord believed that school faculties can get a great deal accomplished if shared leadership is nurtured. People in positions other than formally recognized leadership must be encouraged to provide leadership and direction in addressing the needs of students and staff.

> Three factors are required of principals whose school staff is operating as PLCs:
> - A need to share authority,
> - The ability to facilitate the work of the staff, and
> - The capacity to participate without dominating
>
> (Hall & Hord, 2005, p. 27)

Essential Tasks for Leaders

Two types of leadership are needed to create the conditions for collegiality required for the development of PLCs.

- First, leaders who formulate, sustain and communicate the mission of the school or district; and

- Second, leadership that is distributed with responsibility becoming a capacity held by the whole organization. Distributed leadership lies at the heart of the authentic PLC. This kind of leadership facilitates the development and evolution of the community.

> **Distributed Leadership:**
>
> *Facilitates the building up and nurturing of conversations in a climate of warmth, mutual support, and trust, where questioning and innovation are rewarded* (Hall & Hord, 2005, p. *32)*

Sharing leadership means:

- Creating conditions, rather than giving directions

- Includes freedom to make mistakes

- The spirit of disagreement and debate occurs in a caring context

- Helping others assume and exercise leadership from different positions at both school and district levels.

School Actions to Create Shared and Supportive Leadership

In order to develop conditions where leadership is supportive and shared, principals, teacher leaders, mentors and coaches

- Locate and draw on staff expertise in developing school improvement initiatives

- Create positions that share instructional leadership with the principal

- Consider curriculum and instruction issues alongside workplace improvement. (Knapp et al., 2003a, p. 23)

District Actions to Create Shared and Supportive Leadership

District administrators and professional development staff develop shared values and vision by

- Supporting the development of school-level leadership aimed at learning improvement.

- Use national and state teacher policy initiatives to build teacher leadership and local strategies to improve instruction.

- Develop policies, in collaboration with teacher leaders and unions, that provide teachers with time and resources to act on district and school improvement plans. (Knapp et al., 2003a, p. 23)

From Principles to Practices to Develop Supportive and Shared Leadership

1. Assess Supportive and Shared Leadership

One of the best ways for schools to create the conditions for shared and supportive leadership is to assess the extent to which school administrators participate democratically with teachers sharing power, authority, and decision making by discussing the collective answers to the following questions:

- *Although there are some legal and fiscal decisions required of the principal, do school administrators consistently involve the staff in discussing and making decisions about most school issues?*

- *Do administrators involve the entire staff?*

2. Reflect on Conditions of Supportive and Shared Leadership

Study groups can use staff assessments of the extent of supportive and shared leadership to reflect on the following questions posed by Knapp (2003a) and his colleagues (p. 25):

- How is the leadership shared in your school or district? How is it shared between the district and the school?

- Who leads (or can be encouraged to lead), and how can their leadership be supported?

3. Maryland Instructional Leadership Outcomes Addressed by Developing Supportive and Shared Leadership

Instructional Leadership Outcome	Evidence in Practice
1. Facilitate the Development of a School Vision	The principal is able to demonstrate that there is/are: 1.2 A process for ensuring that all staff and other stakeholders are able to articulate the vision 1.3 Procedures in place for the periodic, collaborative review of the vision by stakeholders 1.4 Resources aligned to support the vision

Instructional Leadership Outcome	Evidence in Practice
2. Align All Aspects of a School Culture to Student and Adult Learning	The principal is able to demonstrate that there is/are: 2.1 Mutual respect, teamwork, and trust in dealings with students, staff, and parents 2.2 High expectations for all students and teachers in a culture of continuous improvement 2.3 An effective school leadership team 2.4 Effective professional learning communities aligned with the school improvement plan, focused on results, and characterized by collective responsibility for instructional planning and student learning 2.5 Opportunities for leadership and collaborative decision making distributed among stakeholders, especially teachers
3. Monitor the Alignment of Curriculum, Instruction, and Assessment	The principal is able to demonstrate that there is/are: 3.1 Ongoing conversations with teachers as to how state content standards, voluntary state curriculum and/or local curriculum, and research-based instructional strategies are integrated into daily classroom instruction 3.2 Teacher assignments that are rigorous, purposeful, and engaging
4. Improve Instructional Practices Through the Purposeful Observation and Evaluation of Teachers	The principal is able to demonstrate that there is/are: 4.3 Formal feedback during observation conferences as well as ongoing informal visits, meetings, and conversations with teachers regarding classroom instruction 4.4 Regular and effective evaluation of teacher performance based on continuous student progress 4.5 Identification and development of potential school leaders
5. Ensure the Regular Integration of Appropriate Assessments into Daily Classroom Instruction	The principal is able to demonstrate that there is/are: 5.1 Multiple and varied assessments that are collaboratively developed

Instructional Leadership Outcome	Evidence in Practice
6. Use Technology and Multiple Sources of Data to Improve Classroom Instruction	The principal is able to demonstrate that there is/are: 6.5 Regular collaboration among teachers on analyzing student work
7. Provide Staff with Focused, Sustained, Research-based Professional Development	The principal is able to demonstrate that there is/are: 7.2 Opportunities for teachers to engage in collaborative planning and critical reflection during the regular school day (job-embedded) 7.3 Differentiated professional development according to career stages, needs of staff, and student performance 7.4 Personal involvement in professional development activities 7.5 Professional development aligned with the Maryland Teacher Professional Development Standards

4. Maryland's Standards for Teacher Professional Development Addressed by Developing Supportive and Shared Leadership

We believe that schools that follow our research-based suggestions for developing supportive and shared leadership are well on their way to meeting most of the indicators associated with Standard 9 of Maryland's *Standards for Teacher Professional Development* focused specifically on designs based on best practices in fostering teacher learning.

Standard 9: Design and teacher learning
Effective professional development content and process reflect best practices in workplace learning and in-depth understanding of how and why adults learn.

   9a. Professional development matches learning experiences, including the intensity and duration, with individual teacher needs, current knowledge and skills, and learning goals.

   9b. Professional development combines a variety of learning experiences, including, but not limited to, individual study, demonstrations, observation, practice, feedback, and reflection as well as opportunities for collaboration and problem solving among colleagues.

   9c. Professional development provides extensive follow-up, including, but not limited to, classroom demonstrations, feedback on mastery of new knowledge, feedback on demonstration of new skills, peer coaching and mentoring, and opportunities for additional study.

   9d. Professional development relies on information technologies to provide more extensive and diverse content, and it also relies on communication technologies to expand access and participation and to create virtual professional learning communities.

9e. Professional development recognizes and draws on the knowledge, skills, and dispositions of successful teachers by including them as leaders, facilitators, and resources in professional learning opportunities.

5. Develop Supportive and Shared Leadership Using mdk12 Website

For follow up study look at *The Performance Indicators for Effective Principal Leadership in Improving Student Achievement* at the mdk12 website: (http://mdk12.org/process/leading/p_indicators.html)

> *According to Mike Schmoker in his book **Results: the Key to Continuous School Improvement**, the combination of three concepts constitutes the foundation for positive improvement results: meaningful teamwork; clear, measurable goals; and the regular collection and analysis of performance data. Principals must lead their school through the goal-setting process in which student achievement data is analyzed, improvement areas are identified and actions for change are initiated. This process involves working collaboratively with staff and school community to identify discrepancies between current and desired outcomes, to set and prioritize goals to help close the gap, to develop improvement and monitoring strategies aimed at accomplishing the goals, and to communicate goals and change efforts to the entire school community. Principals must also ensure that staff development needs are identified in alignment with school improvement priorities and that these needs are addressed with appropriate professional learning opportunities.*

Consequently, any assessment of a principal's effectiveness should consider capacities in the five performance areas have been identified as the critical leadership skills a principal must demonstrate to effectively lead a school in improving student achievement.

- Promoting collaborative problem solving and open communication
- Collecting, analyzing, and using data to identify school needs
- Using data to identify and plan for needed changes in the instructional program
- Implementing and monitoring the school improvement plan
- Using systems thinking to establish a clear focus on attaining student achievement goals

Also for follow up study look at the **Process of Organizing a School Improvement Team** in School Improvement Maryland (http://mdk12.org/process/leading/principals_role.html):

> *A School Improvement Team functions best in a supportive and enabling culture committed to enhanced achievement for all students. The nature of School Improvement Teams, School-Based Decision-Making, and participative management is that decisions will be made at the local site by those performing the functions. Use the score sheets on this site to assess how well your current team is displaying recommended traits, attitudes, and skills that an effective School Improvement Team (SIT) should possess.*

DESIGN PRINCIPLE FOUR: Create Supportive Conditions

Supportive conditions provide the infrastructure and basic requirements of the when, where, and how staff can collectively come together as a whole to learn, to make decisions, and to do create problem solving, and to implement new practices-actions that are characteristic of the PLC (Hord & Hall, 2005, p. 27).

Morrissey (2000) found that "creating supportive structures, including a collaborative environment, has been described as the 'single most important factor' for successful school improvement and 'the first order of business' for those seeking to enhance the effectiveness of their school" (p. 8).

Hord (1997) identified two kinds of supportive structures within a school that operates as a PLC:

1) structural conditions; and

2) relationships.

Examples of structural conditions include use of time, communication procedures, size of the school, proximity of teachers to each other, teaching roles that are interdependent, teacher empowerment, and professional development processes.

Aspects of supportive conditions that are relevant to relationships are meant to capitalize on the human capacities of the individuals within the organization. Examples of elements that fall under the component of relationships include positive educator attitudes, shared vision and sense of purpose, willingness to accept feedback, strong cognitive skills, norms of continuous inquiry and improvement, respect, trust, and positive, caring relationships (Morrissey, 2000)**.**

> **Indicators of a Caring and Productive Environment:**
>
> Positive teacher attitudes toward schooling, students, and change.
>
> Students' heightened interest and engagement with learning.
>
> Positive, caring student-teacher-administrator relationships.
>
> Supportive community attitudes
>
> Parents and community members as partners and allies.
>
> *(Hall & Hord, 2005, p. 23)*

"Supportive conditions determine *when, where,* and *how* the staff regularly come together to do the learning, decision-making, problem solving, and creative work that characterize a professional learning community" (Hord, 2004, p. 10).

Principals can provide aspects of both structural and relationship elements of PLCs. The functioning of the PLCs within the organization will be further enhanced if various district and community groups are supportive of the PLC structure as well.

Essential Tasks for Leaders in Creating Supportive Conditions

The essential tasks for leaders in creating supportive conditions include:

- *Making efforts to understand community, professional, and policy environments, especially the elements that matter most for learning and teaching.*

> *Leaders need allies and some degree of mutual trust outside the organization as a base for moving forward on an aggressive improvement agenda. Through building external relationships, leaders develop political support for the learning agenda and manage conflicts surrounding it. (Knapp et al., 2003a, p. 21)*

- *Building relationships with individuals and groups to support specific aspects of the learning improvement agenda and also as a source of general good will.*

- *Anticipating resistances and devising ways to manage conflict.*

- *Garnering fiscal, intellectual, and human resources that support the learning agenda. (Knapp et al., 2003a, p. 19)*

School Staff Actions to Create Supportive Conditions
In order to develop supportive conditions, principals, teacher leaders, mentors and coaches

- *Establish educational opportunities for community members that complement learning opportunities for school staff.*

- *Draw in potential critics by involving them in the school improvement process.*

- *Develop allies in the central office and proactively seek support for student and professional learning goals. (Knapp et al., 2003a, p. 20)*

District Actions to Create Supportive Conditions
District administrators and professional development staff develop supportive conditions by

- *Educate school board members in building an improvement agenda and engage them as part of a district learning community.*

- *Promote the student and professional learning agenda with the media and influential community groups.*

- *Develop allies at the state level and use these contacts to increase flexibility and instructional resources.*

- *Strategically use external requirements and resources to advance a local learning agenda.*

- *Form partnerships with civic or professional bodies that focus on learning improvement. (Knapp et al., 2003a, p. 20)*

From Principles to Practices to Create Supportive Conditions

1. Assess Supportive Conditions
One of the best ways for staff to create conditions and capacities support the school's arrangement as a professional learning organization is to engage in a collective assessment of staff answers to the following questions:

- *Is time arranged and committed for whole staff interactions?*

- *Do the site, structure, and arrangements of the school facilitate staff proximity and interaction?*

- *Are a variety of processes and procedures are used to encourage staff communication?*

- *Does trust and openness characterize all the staff?*

- *Do caring, collaborative, and productive relationships exist among all the staff?*

2. Reflect on Supportive Conditions

Study groups can use staff assessments of the extent of supportive conditions to reflect on the following question:

- *How can schedules and structures be created that reduce isolation?*

- *What policies are needed to foster collaboration?*

- *What policies are needed to increase communication?*

- *What physical conditions are needed to foster collegial relationships?*

- *What capacities must be developed in people so that they can engage in continuous learning and improvement?*

3. Maryland Instructional Leadership Outcomes Addressed by Creating Supportive Conditions

Instructional Leadership Outcome	Evidence in Practice
1. Facilitate the Development of a School Vision	The principal is able to demonstrate that there is/are: 1.1 A written school vision that encompasses values, challenges, and opportunities for the academic, social, and emotional development of each student 1.2 A process for ensuring that all staff and other stakeholders are able to articulate the vision 1.3 Procedures in place for the periodic, collaborative review of the vision by stakeholders 1.4 Resources aligned to support the vision
2. Align All Aspects of a School Culture to Student and Adult Learning	The principal is able to demonstrate that there is/are: 2.1 Mutual respect, teamwork, and trust in dealings with students, staff, and parents 2.2 High expectations for all students and teachers in a culture of continuous improvement 2.3 An effective school leadership team 2.4 Effective professional learning communities aligned with the school improvement plan, focused on results, and characterized by collective responsibility for instructional planning and student learning 2.5 Opportunities for leadership and collaborative decision making distributed among stakeholders, especially teachers

Instructional Leadership Outcome	Evidence in Practice
8. Engage All Community Stakeholders in a Shared Responsibility for Student and School Success	The principal is able to demonstrate that there is/are: 8.1 Parents and caregivers welcomed in the school, encouraged to participate, and given information and materials to help their children learn 8.2 Parents and caregivers who are active members of the school improvement process 8.3 Community stakeholders and school partners who readily participate in school life

4. Maryland's Standards for Teacher Professional Development Addressed by Creating Supportive Conditions

We believe that schools that follow our research-based suggestions for creating supportive conditions are well on their way to meeting most of the indicators associated with Standards 3 and 9 of Maryland's *Standards for Teacher Professional Development* focused specifically on best practices in fostering teacher learning and on collaboration.

Standard 3: Collaboration
Effective professional development ensures that teachers have the knowledge, skills, and dispositions to collaborate with others to improve instruction.

3.a Professional development provides ongoing opportunities for teachers to practice working with colleagues, including other teachers, principals, counselors, social workers, and others, and emphasizes that collaboration is a means and not an end in addressing issues related to school improvement and improved student learning.

3.b. Professional development emphasizes constructive management of conflict and fosters understanding that disagreement and conflict are potentially beneficial elements of professional discourse.

3.c Professional development relies on communication technologies to broaden the scope of collaboration.

Standard 9: Design and teacher learning
Effective professional development content and process reflect best practices in workplace learning and in-depth understanding of how and why adults learn.

9a. Professional development matches learning experiences, including the intensity and duration, with individual teacher needs, current knowledge and skills, and learning goals.

9b. Professional development combines a variety of learning experiences, including, but not limited to, individual study, demonstrations, observation, practice, feedback, and reflection as well as opportunities for collaboration and problem solving among colleagues.

9c. Professional development provides extensive follow-up, including, but not limited to, classroom demonstrations, feedback on mastery of new knowledge, feedback on demonstration of new skills, peer coaching and mentoring, and opportunities for additional study.

9d. Professional development relies on information technologies to provide more extensive and diverse content, and it also relies on communication technologies to expand access and participation and to create virtual professional learning communities.

9e. Professional development recognizes and draws on the knowledge, skills, and dispositions of successful teachers by including them as leaders, facilitators, and resources in professional learning opportunities.

5. Create Supportive Conditions Using mdk12 Website

For further study review the School Improvement Maryland website on Benchmarking School Improvement Efforts (http://mdk12.org/process/benchmark/) .

Study how Maryland Districts and Schools Organize School Improvement Efforts to create supportive conditions.

Study what featured schools did to improve student achievement, how they used the school improvement process

Review what research studies tell you about professional learning communities

Read Shirley Hord's publication: Professional Learning Communities: Communities of Inquiry and Improvement, SEDL (http://www.sedl.org/pubs/change34/

DESIGN PRINCIPLE FIVE: Develop Shared Personal Practice

In a PLC teachers visit each other's classrooms to review their teaching behavior. This practice is in the spirit of peers supporting peers (Hall & Hord, 2005, p. 27).

Elmore (2000) found "schools and school systems that are improving directly and explicitly confront the issue of isolation" (p. 17). In the schools studied by Hord (1997, 2000) and Morrissey (2000), teachers having time to share their views and knowledge about professional aspects of teaching was critical. His conclusion that "creating multiple avenues of interaction among educators and promoting inquiry-oriented practices while working toward high standards of student performance" (Elmore, 2000, p. 2), best describes the focus of Dimension Five of Hord's concept of PLCs. Morrissey (2000) reported that although shared personal practice is a critical aspect of PLCs it is often the last dimension to be developed. Darling-Hammond (1998) reported that teachers who spend time sharing their expertise are more effective in developing higher-order thinking skills in their students and are more effective in meeting the diverse learning needs of today's students.

This suggests that meeting AYP is more likely in teaching and learning environments that promote the development of this dimension of PLCs. Morrissey (2000) stated "one factor organizes all contexts within a professional learning community, and that is the shared purpose of improving student learning outcomes" (p. 9).

Essential Tasks for Leaders in Supporting Shared Personal Practice

The essential tasks for leaders in supporting shared personal practice include:
- Building trusting relationships among professionals in the school or district.
- Modeling, guiding, and facilitating shared personal practice.

School Staff Actions to Develop Shared Personal Practice
In order to develop shared personal practice, principals, teacher leaders, mentors and coaches should:
- Provide opportunities for peer observations to offer knowledge, skills, and encouragement.
- Coach and mentor teachers to share outcomes of instructional practices

District Actions to Create Supportive Conditions
District administrators and professional development staff develop supportive conditions by
- Supporting schedule changes that enable staff to work together.
- Working with the union to establish provisions for collaborative work among teachers
- Modeling shared personal practice by taking party in professional learning opportunities as colleagues.

From Principles to Practices for Supporting Shared Personal Practice

1. Assess Extent of Shared Personal Practice
One of the best ways for staff to become engaged in peers review and giving feedback based on observing each other's classroom behaviors in order to increase individual and organizational capacity is to engage in a collective assessment of staff answers to the following questions:
- *Does the staff regularly and frequently visit and observe each other's classroom teaching?*
- *Does the staff provide feedback to each other about teaching and learning based on their classroom observations?*

2. Reflect on Conditions Supporting Shared Personal Practice
Study groups can use staff assessments of the extent of shared personal practice to reflect on the following question:
- *How well are your colleagues basic professional needs being met? How ready are they to critically examine their own and each other's practice?*

3. Maryland Instructional Leadership Outcomes Addressed by Shared Personal Practice

Instructional Leadership Outcome	Evidence in Practice
1. Facilitate the Development of a School Vision	The principal is able to demonstrate that there is/are: 1.2 A process for ensuring that all staff and other stakeholders are able to articulate the vision 1.3 Procedures in place for the periodic, collaborative review of the vision by stakeholders 1.4 Resources aligned to support the vision

Instructional Leadership Outcome	Evidence in Practice
2. Align All Aspects of a School Culture to Student and Adult Learning	The principal is able to demonstrate that there is/are: 2.1 Mutual respect, teamwork, and trust in dealings with students, staff, and parents 2.2 High expectations for all students and teachers in a culture of continuous improvement 2.3 An effective school leadership team 2.4 Effective professional learning communities aligned with the school improvement plan, focused on results, and characterized by collective responsibility for instructional planning and student learning 2.5 Opportunities for leadership and collaborative decision making distributed among stakeholders, especially teachers
3. Monitor the Alignment of Curriculum, Instruction, and Assessment	The principal is able to demonstrate that there is/are: 3.1 Ongoing conversations with teachers as to how state content standards, voluntary state curriculum and/or local curriculum, and research-based instructional strategies are integrated into daily classroom instruction 3.2 Teacher assignments that are rigorous, purposeful, and engaging
4. Improve Instructional Practices Through the Purposeful Observation and Evaluation of Teachers	The principal is able to demonstrate that there is/are: 4.3 Formal feedback during observation conferences as well as ongoing informal visits, meetings, and conversations with teachers regarding classroom instruction 4.4 Regular and effective evaluation of teacher performance based on continuous student progress 4.5 Identification and development of potential school leaders
5. Ensure the Regular Integration of Appropriate Assessments into Daily Classroom Instruction	The principal is able to demonstrate that there is/are: 5.1 Multiple and varied assessments that are collaboratively developed 5.2 Formative assessments that are a regular part of the ongoing evaluation of student performance and that serve as the basis for adjustments to instruction 5.3 Summative assessments that are aligned in format and content with state assessments 5.4 Appropriate interventions for individual students based on results of assessments

Instructional Leadership Outcome	Evidence in Practice
6. Use Technology and Multiple Sources of Data to Improve Classroom Instruction	The principal is able to demonstrate that there is/are: 6.4 Ongoing root cause analysis of student performance that drives instructional decision making 6.5 Regular collaboration among teachers on analyzing student work
7. Provide Staff with Focused, Sustained, Research-based Professional Development	The principal is able to demonstrate that there is/are: 7.2 Opportunities for teachers to engage in collaborative planning and critical reflection during the regular school day (job-embedded) 7.3 Differentiated professional development according to career stages, needs of staff, and student performance 7.4 Personal involvement in professional development activities 7.5 Professional development aligned with the Maryland Teacher Professional Development Standards

4. Maryland's Standards for Teacher Professional Development Addressed by Fostering Shared Personal Practice

We believe that schools that follow our research-based suggestions for creating opportunities for shared personal practice are well on their way to meeting most of the indicators associated with Standards 3 and 9 of Maryland's *Standards for Teacher Professional Development* focused specifically on best practices in fostering collaboration and teacher learning.

Standard 3: Collaboration
> *Effective professional development ensures that teachers have the knowledge, skills, and dispositions to collaborate with others to improve instruction.*

3a. Professional development provides ongoing opportunities for teachers to practice working with colleagues, including other teachers, principals, counselors, social workers, and others, and emphasizes that collaboration is a means and not an end in addressing issues related to school improvement and improved student learning.

3b. Professional development emphasizes constructive management of conflict and fosters understanding that disagreement and conflict are potentially beneficial elements of professional discourse

3c. Professional development relies on communication technologies to broaden the scope of collaboration.

Standard 9: Design and teacher learning
> *Effective professional development content and process reflect best practices in workplace learning and in-depth understanding of how and why adults learn*

9a. Professional development matches learning experiences, including the intensity and duration, with individual teacher needs, current knowledge and skills, and learning goals.

9b. Professional development combines a variety of learning experiences, including, but not limited to, individual study, demonstrations, observation, practice, feedback, and reflection as well as opportunities for collaboration and problem solving among colleagues

9c. Professional development provides extensive follow-up, including, but not limited to, classroom demonstrations, feedback on mastery of new knowledge, feedback on demonstration of new skills, peer coaching and mentoring, and opportunities for additional study.

9d. Professional development relies on information technologies to provide more extensive and diverse content, and it also relies on communication technologies to expand access and participation and to create virtual professional learning communities

9e. Professional development recognizes and draws on the knowledge, skills, and dispositions of successful teachers by including them as leaders, facilitators, and resources in professional learning opportunities.

5. Develop Shared Personal Practice Using mdk12 Website
For follow up study look at Monitoring Student Progress in School Improvement Maryland and use the site to guide *Planning of Data Dialogues* (http://mdk12.org/data/progress/examining/m4w3/pr1/index.html)

*In a JSD article entitled, **In the Right Context,** Rick DuFour, superintendent of Adlai Stevenson High School District 125 in Illinois, charges principals with providing a school context that fosters job-embedded professional development and with creating in their schools the collaborative culture of a professional learning community. However, he says that creating an appropriate structure for teacher collaboration is vitally important, but also insufficient. Principals must do more than organize teacher teams and hope for the best. They must provide the focus, parameters, and support to help teams function effectively. More specifically, principals who are staff development leaders must:*

1. ***Provide time for collaboration in the school day and school year.*** *Providing time for teachers to work together does not require keeping students at home and/or an infusion of new resources. Principals as staff development leaders work with staff to identify no-cost strategies that enable teachers to work together on a regular basis while students are on campus.*

2. ***Identify critical questions to guide the work of collaborative teams.*** *The impact of providing time for teachers to engage in collective inquiry will be determined to a great extent by the nature of the questions teachers are considering. Principals must help teams frame questions that focus on critical issues of teaching and learning.*

3. ***Ask teams to create products as a result of their collaboration.*** *The best way to help teachers use their collaborative time productively is to ask them to produce and present artifacts in response to the critical questions they are considering. Examples might include statements of student outcomes by units of instruction, development of new units to address gaps between state standards and local curriculum, creation of common assessments and rubrics, articulation of team protocols or norms to guide the interactions of team members, or formulation of improvement plans based on analysis of student achievement data.*

4. ***Insist that teams identify and pursue specific student achievement goals.*** *The driving force behind the effort to create a collaborative culture must be improved results.*

Principals foster improved results when they ask teaching teams to identify and pursue specific, measurable student achievement goals.

5. **Provide teams with relevant data and information.** *When every teacher has access to information on his or her students performance in meeting agreed upon standards, on valid assessments, in comparison to other students trying to achieve the same standards, both individual teachers and teams improve their effectiveness*

(http://mdk12.org/data/progress/examining/m4w3/pr1/index.html)

VIII. The Harford County Public Schools Model

All of the conditions we have just described require a unique workplace culture that fosters teachers' sense of collective efficacy. How is such a culture created? Current research tells us that school districts matter more than has been commonly assumed in the development of productive workplaces for teachers to become a professional learning community. Research also underscores the crucial importance to the development of PLCs of leadership at all levels that focuses on creating coherence. Next we describe why districts and leaders are each important influences on the development of PLCs, and why they should focus on creating coherence using lessons from the work of Harford County Public Schools.

The School District's Role in PLC Development

For several years we have explored how to support systemic change at the school district level, from examination of case studies of districts engaged in reforms that support the creation of PLCs.

Considering lessons taken from these case studies, in the spring of 2001, Jackie

- 44% of teachers in HCPS in 2002 had less than five years of experience.
- Among the four HCPS elementary schools enrolling *more than* 50% poor children, an average of 32% of teachers earned advanced professional certificates and teachers reported an average of 9.9 years of experience.
- Among the seven HCPS elementary schools serving *fewer than* 5% poor children, an average of 62% of teachers had earned advanced professional teaching certificates and teachers reported an average of 14.30 years of experience.

Haas, as Superintendent of Harford County Public Schools (HCPS) began a process of planning that eventually led to the adoption of a system reform model that featured the development of professional learning communities. We recognized that higher student performance standards and new state-mandated curriculum pose challenges to all teachers and particularly to inexperienced and less-prepared teachers.

We also recognized that teacher effectiveness is the key to meeting those standards and set about systematically examining research on this topic. As part of this effort, Jackie Haas examined research on other district reform initiatives and established a framework for district actions to build instructional leadership capacity through professional development. The resulting theory of action for HCPS included elements aligned with

NCLB requirements identified in current research as "high quality" professional development.

The theory of action is designed to take into account evidence of the influence of workplace conditions and workplace culture on teachers' practice, and consequently on student outcomes. A growing body of evidence supports a strong relationship between teacher behavior and student learning. The research suggests that the most powerful way to improve student learning is to improve teacher performance. School-based professional learning communities hold promise for creating the organizational arrangements and conditions for instructional improvements that can improve student learning outcomes.

> Researchers (McLaughlin and Talbert, 2003) studying school reform in successful California districts also found that in these districts, schools and the central office both focus upon teaching and learning as their main mission.

We also found the capacity of the *school* acting alone to bring about improvement is limited. Improving the quality of teaching so all students can learn demands action at the *system* level. Most research has focused upon the school as the unit of change and the school principal as primary change agent. However, ambitious goals for student achievement require the school system and schools to work together to support high-quality teaching.

Researchers have studied effective school districts to learn about their practices. They have found a common thread: *a strong focus on teaching and learning*.

Researchers have identified characteristics common to improving school districts:

- a system approach to reform,

- learning community at the central office,

- coherent focus on teaching and learning,

- support for professional learning and instructional improvement, and

- data-based inquiry.

> Scott Thompson (2002) has identified *five characteristics of successful school districts.*
> These include:
> - A vision, mission, policies, are resources all focused upon enabling all students to meet high standards;
> - System and school accountability for meeting standards;
> - Consistent gathering and analysis of data to monitor progress and identify needs and challenges;
> - Professional development of teachers and administrators that is intensive, ongoing, and job-embedded,
> - Provision of health and services to needy students and their families.

The HCPS logic of action was designed to model these characteristics. We recognized that one of the central lessons from research on how school improvement occurs is that *coherence* is essential.

In developing the HCPS logic of action we considered the work of Michael Knapp and his associates at the Center for the Study of Teaching and Policy who have developed a framework of reflective ideas and tools to support the improvement efforts of leaders

(Knapp et al., 2003). One of their key ideas is that *leading for learning* involves developing clarity and coherence by creating pathways that connect the three learning agendas that comprise the basis for improvement:

Student learning depends on how teachers implement curriculum, design academic tasks, and engage students in these tasks, as well as how students approach their teachers, each other, and their work.

> Powerful and equitable instruction enables all students to develop deep subject matter knowledge and skills. (Knapp, et al., 2003

Professional learning includes the knowledge, skills and perspectives that teachers and administrators acquired while preparing for and renewing their practice. Knapp (2003) and his colleagues report, "opportunities for effective professional development include those that come from interacting with other professionals who offer ideas, critique, inspiration, and moral support in the renewal process" (p. 10).

> Through inquiry into how a district functions and performs, leaders can support "system learning" (Knapp et al., 2003, p. 11).

System learning occurs through "strategic planning; evaluation of policies, programs, and resource use; "action research" focused on system-wide issues; and application of indicators to measure progress toward defined goals" (p. 11).

Challenges to Creating Coherence

Knapp and his colleagues report that critical to the task of leading for learning is finding ways to create coherence by ensuring that activities are linked, and that they connect student, professional and system learning. Aligning learning improvement activities is challenging because it involves:

- Developing consensus for carrying out improvement activities;

- Linking those activities to a compelling vision that emphasizes powerful equitable student learning; and allocating resources to activities

> "Maryland schools take very seriously the job of preparing students, offering more AP courses in high school and strengthened academic rigor at all levels," said **State Superintendent of Schools Nancy S. Grasmick.** "High standards and accountability pave the way for success for all of our students in whatever they plan to do after high school." (Measuring-Up-2004, Annapolis, MD, September 15, 2004)

State accountability systems and assessments play a crucial role in creating coherence. HCPS educators are well aware that teaching for meaning is as crucial for fostering students' deep understandings of content areas as it is for leading students to achieve and to develop the dispositions they want to achieve.

Teaching for meaning is required if all of Maryland's students are to have opportunities to achieve proficiency in state assessments and if teachers are to meet the high standards set by the state.

The state of Maryland has led the country in supporting instructional improvement through an accountability system intended to ensure that each student has opportunities to achieve.

Maryland's Visionary Panel, called for "alignment of every aspect of education—educators' preparation and professional development, policymaking, testing, curriculum, leadership, and funding—to support the classroom teacher and student."

Maryland's *Bridge to Excellence Act* calls on districts to use their master plans to align resource allocation and reform goals.   In response to these recommendations, Maryland has developed a Voluntary State Curriculum (VSC) that aligns the Maryland Content Standards and the Maryland Assessment Program. As evidence of system alignment, HCPS teachers and others across Maryland are now able to look at a Voluntary State Curriculum to guide their instructional designs.

Essential Tasks for HCPS Leaders in Creating Coherence

We recognized that HCPS leaders faced challenges in creating clarity and coherence so that professional learning communities could develop. In addressing these challenges, we identified several essential tasks for creating coherence that would:

- Utilize pathways that intentionally address student, professional, and system learning around a focused improvement agenda

- Align activities with resources, with each other, and with compelling visions for the improvement of learning and teaching.

- Create structures and incentives for learning around a common improvement agenda at all levels of the system.

In addressing these tasks, as Superintendent, Jackie Haas considered the actions that had been taken by other districts recognized for their efforts to create the kind of conditions associated with professional learning communities. The HCPS logic of action was designed to focus on ten types of actions:

1. Reorganization of system, time, or schools; creation of supportive structures of some type to support the work of the schools on PLCs;
1. Resource allocation such as time, people, materials, or special forms of funding;
2. Defining vision and beliefs about the value of PLCs;
3. Assessing the needs of the schools or district and promoting the use of data;
4. Defining and communicating expectations for the schools;
5. Defining priorities and maintaining focus on the PLC initiative;
6. Providing training;
7. Monitoring and oversight of the school progress;
8. Communication of vision messages to school administrators and school staff; and
9. Defining roles and responsibilities for the Instructional Leadership Team (ILT) members and the staff.

Harford County Public Schools Logic of Action

District Actions and Strategies

1 Reorganization/ Creation of Structures	**2** Resource Allocation	**3** Defining Vision, Values, Beliefs	**4** Data use, Needs Assessment & Initiative	**5** Defining & Communicating Expectations
6 Defining Priorities & Maintaining Focus	**7** Training	**8** Monitoring and Oversight	**9** Communication of Vision Messages	**10** Defining Roles and Responsibilities

Shared Values & Visions ↔ Professional Learning Communities ↔ Shared Personal Practice

Collective Learning & Application — Supportive & Shared Leadership — Supportive Conditions

HCPS Systems Model of Planned Change

Creating Coherence by Focusing on Organizational Systems
Turning to the work of Wayne Hoy and Cecil Miskel (2004) in outlining a systems approach to understanding the dynamics of transformational change, we recognized that the actions that had been taken by districts viewed by researchers as effective in creating conditions supporting the development of professional learning communities addressed specific challenges within the political, structural, cultural and individual systems operating in complex organizations like school districts. The HCPS model of change was designed to address the specific challenges in transforming each of these systems.

Harford County Public Schools Model of Transformation to a Professional Learning Community

Using this systems model as a guide planning for the HCPS, implementation of PLCs began in the spring of the 2001-2002, when Dr. Haas adopted the goal of creating PLCs as a means of achieving systemic culture change. The discussion and deployment process began with a session of the system's executive staff in the spring of 2002. Leading up to the actual initiative planning and preparation, the Superintendent sought to bring the senior staff to a level of agreement and support of the concept that the PLC structure was the most promising approach to create the continuous learning culture desired in the district. This served as the beginning of developing shared vision, values, and beliefs about the PLC culture.

Subsequently, a Central Instructional Leadership Team (CILT) was created, as part of a reorganization that included the re-deployed central office staff members to provide additional support to schools. Teacher support teams included instructional facilitators (IFs, who previously served as central office supervisors) and teacher mentors (shared by two schools). In the HCPS logic of action school principals are expected to observe classroom instruction and student work on a regular basis, to engage teachers in professional conversations about teaching and learning, and to lead the teacher evaluation process in the school, supported by central office staff.

IX. HCPS Lessons in Developing Professional Learning Communities

The larger task has been to build the capacity of schools to provide effective instruction so that all students can meet the challenges of rigorous learning. Traditional teaching—a "one size fits all" approach to instruction—guaranteed that the old patterns of school achievement, which clearly worked against many students, would simply be repeated and the high expectations for *all* students articulated by NCLB would not be met. The challenge to "business as usual" in the schools, though, was no less than changing the way people in the school perceived their roles and relationships and begin to work together. HCPS's approach offers several lessons for districts seeking to engage in transformational change through the development of professional learning communities.

1. Systemic Action Research is Valuable
A key feature of the HCPS model of transformational change has been the use of research to guide the design, development and implementation of the action plan. For example, in refining strategies to support the development of cultural conditions essential to school-based professional learning communities HCPS undertook system wide research to establish a baseline of readiness prior to implementation of the district's actions in support of the development of PLCs. All teachers employed in the Harford County Public Schools were surveyed in August 2003, on their perceptions of PLC readiness and collective efficacy and again in June 2005. In the two years between these district-wide surveys the CILT conducted ongoing research on the implementation of the districts actions. Lessons learned were used to revise and refine those actions. The process of ongoing research was critically important in developing the professional learning culture across the district at all levels and in refining the HCPS logic of action.

2. Conditions of Professional Learning are Related to Collective Efficacy Beliefs
Ongoing research by the district allows us to conclude that one of the most significant lessons from the HCPS experience is that intensification of efforts to create professional learning communities is associated with teacher collective efficacy beliefs. Perceived collective efficacy is a construct derived from social cognitive theory that is based on the assumption that "the choices that individuals and organizations (through the actions of individuals) make are influenced by the strength of their efficacy beliefs" (Goddard, Hoy & Hoy, 2004, p. 4). The recent research interest in perceived collective efficacy is based on emerging evidence suggesting that they are linked to group goal attainment. Several studies have shown a strong link between perceived collective efficacy and differences in student achievement among schools (Bandura, 1993, 1997; Goddard, 2001, Goddard et al., 2000). Goddard and his colleagues found that "perceptions of collective efficacy directly affect the diligence and resolve with which groups choose to pursue their goals. Hence perceived collective efficacy is a potent way of characterizing the strong normative and behavioral influence on an organization's culture" (2004a, p. 8).

In 2002, HCPS began planning for a strategic initiative to create PLCs in all district schools that took into account research on the potential of teachers' collective efficacy beliefs to support their commitment to enhanced student learning. By June 2003 the HCPS theory of action had been developed. It included a reorganization of central office personnel to create school based instructional facilitators charged with the task of supporting the school instructional leadership teams in their work of developing professional learning communities. Intensive professional development was planned to

introduce school instructional leadership teams to research on professional learning communities, and as part of dissemination of the plan to school personnel, a survey was created to establish benchmark understanding of teacher perceptions about school readiness for professional learning, and their collective efficacy beliefs. The survey combined items from two instruments, the School as Learning Organization (SLO) developed by Hord (1997), and four items from the Collective Efficacy Scale (CE-Scale) developed by Goddard (2001).

In June 2005, following two years of implementation of the action plan; a revised survey was administered to all district teachers. The 2005 survey included all the items previously included from the School as Learning Organization Scale (SLO) developed by Hord (1997), but added four items to the four items used in the 2003 survey from the Collective Efficacy Scale (CE-Scale) developed by Goddard (2001).

Analysis of the results of the two year follow up survey revealed that HCPS teachers' perceptions of collective efficacy and their perceptions of conditions supporting professional learning communities continued to be moderately or substantially related, and all were positive. In the two-year follow up study the correlation between total score on Schools as Learning Organization scale and total Collective Efficacy scale was .62 in comparison to the correlation of .48 found in the pre-implementation survey. This suggests that after two years of district activities to support the development of school-based PLCs, there was a strengthened correlation between teachers' perceptions of conditions of professional learning and their collective efficacy beliefs.

This suggests that the two year period of the intensification of the district focus on encouraging school leadership teams to engage in practices that enhanced the creation of school based professional learning resulted in a strengthened relationship between teachers' perceptions of those conditions and their collective efficacy beliefs.

3. Collective Efficacy Beliefs are Related to Increased Student Achievement

Our research on the HCPS strategy revealed that correlations between teachers' perceptions of collective efficacy and their perceptions of school PLC readiness are moderately or substantially related. This suggests that teachers who perceive their school to be characterized by the dimensions of PLCs: shared leadership, focused vision, collaborative work, shared observation, and supportive conditions also perceive their colleagues to be effective in bringing about student learning.

The relation between collective efficacy and school culture and student achievement was examined in a regression analysis performed with school mean scores. Student achievement was measured as the percent of students in the school achieving a rating of proficient or better in reading and mathematics on the Maryland School Assessment, the standardized statewide measure of reading and mathematics skills used to calculate school AYP. Two separate analyses were performed, one for reading and one for mathematics. Both analyses included only elementary school data.

Analysis revealed only two variables, previous year's proficiency and collective efficacy, to be significant predictors of current reading proficiency among elementary schools. None of these variables predicted current levels of proficiency in mathematics. However, significantly the study of early implementation of the HCPS initiative found correlations

between teachers' perceptions of conditions conducive to professional learning communities and their perceptions of collective efficacy in their schools (Mawhinney, Haas, & Wood, 2005).

4. District Actions Should Create Coherence

The evidence from HCPS research provides support for the general conclusion reached by other researchers that that "teachers' sense of efficacy is positively related to aspects of organizational context such as positive school climate, lack of impediments to effective instruction, teacher empowerment, as well as principal influence with superiors and the academic press of a school"(Goddard Hoy, & Hoy, 2004, p. 8). It confirms the critical importance of the efforts of district level administrators to create coherence.

In HCPS leaders sought to initiate the establishment of a PLC culture as the standard operating procedure for all district schools and business environments. This required a coherent approach to system wide change that focused on addressing the issues in structural, political, individual, and cultural systems impacted by the PLC initiative in such a way that the sought after transformational processes occurred. This required that District actions, such as monitoring and oversight, be appropriately targeted and understood by school faculty.

Districts should engage in ongoing action research, and make appropriate changes as a result of that action research. In the case of the HCPS PLC initiative, such changes were made when the Central Office Leadership Team (CILT) learned from the school-based teams that there was a need to monitor and observe the operation of the school Instructional Leadership teams and PLCs at the school level. This process was included in the CILT work plan for the following year.

We conclude that districts seeking to create PLCs should ensure that district level administrators and staff strive to:

- Make expert staff available to schools to help with focused improvement efforts.

- Restructure the district professional development function to support curriculum and instructional efforts

- Develop data that provide information about student learning which can be used in professional development.

- Allocate resources consistently in support of student and professional learning goals. (Knapp et. al., 2003a, p. 27)

5. School Instructional Leadership Must Be Developed

Significantly, the leaders of HCPS used their research to direct further development of the reform. Seeking to create high-performing schools and focusing upon teachers collective efficacy beliefs as indicators of readiness as a professional learning community, the Central Instructional Leadership Team (CILT) of HCPS developed a set of strategies to enhance the conditions for growth of professional learning communities designed to provide opportunities for ongoing, collaborative learning by teachers and administrators.

Research by CLIT on these strategies revealed that one of the most effective way to transform school culture so that good instruction becomes the focus of attention in the school is the development of principals' capacity to provide instructional leadership to their staff and a change in the focus of the principal

That capacity includes building a vision of quality instruction (what it looks like in the classroom), establishing clear expectations for teachers, ensuring that good instruction is occurring every day in every classroom, and creating a meaningful professional learning community where teachers feel safe and supported as they change their practices as a result of collaboration and study.

Insights from the HCPS experience suggest that school leaders do important work in developing coherence by:

> The major role of the leader—whether system- or school level—is to ***create learning environments*** for students, professionals, and the organization.
> (Knapp, et al. 2003)

- Building professional development around data on student learning

- Locating professional development in classrooms

- Using inquiry into learning and teaching performance as a basis for ongoing school improvement planning.

- Ensuring that goals for learning improvement are consistent with values shared by the school community.

- Using teacher evaluation and school improvement planning as vehicles to focus on learning goals. (Knapp et. al., 2003a, p. 27)

6. *Superintendents Make A Difference:*

One of the most important lessons from the HCPS experience in developing PLCs is that superintendents play a key role in creating a culture of professional learning. This study found that districts can initiate actions that influence the development of attributes of PLCs in schools across the district. The focus of the Suburban District initiative was consistent with the belief that school systems can influence the creation of the desired conditions.

The HCPS experience supports claims by McLaughlin and Talbert (2003) who argued against three myths that others believe exist with regard to strong district leadership that would prevent districts from being successful in their efforts. These myths include: (a) resistance from principals and teachers to district leadership; (b) staff turnover, causing lost ground in the change; and (c) local politics. Instead, McLaughlin and Talbert argued that district leadership is accepted if a strong framework and involvement support the district's efforts. They further argued that if the superintendent had a consistent, focused agenda that was supported by the Board of Education over time, the leadership of the district could navigate political challenges. \

The actions taken by the HCPS leadership demonstrate that districts can create focus on a few aspects of change and develop school commitment to that change by supporting it with consistent messages. The reallocation or reassignment of staff from central office to the schools to take on new the roles as instructional facilitators and teacher mentors sent

clear messages to everyone in HCPS that supporting the schools was more important than centralizing efforts in offices away from schools. The District Central Instructional Leadership Team (CILT) outlined the roles and responsibilities of reassigned staff to specify that they were to spend their time in direct instructional leadership activities and not drift to tasks involved in the day-to-day management of the school.

Training provided by a external consultant on best instructional practices to principals, instructional facilitators and mentors was intended to increase the comfort level of school-based Instructional Leadership Team (ILT) members in guiding discussions on improved instructional practice, and to increase their confidence and capacity to model lessons that incorporated these instructional practices. Developing skills in critical dialogue and observation helped focus administrative teams on instructional practices. The HCPS logic model included actions reported in case studies of other districts efforts to create system-wide change. One of the widely reported actions, defining priorities and maintaining focus, was identified as important and viewed by members of the ILTs as a helpful action that the CILT understood often.

As part of the ongoing action research on the HCPS effort the create PLCs, case studies were conducted in ten district schools at the end of the first year of implementation of the initiative. Findings of that research revealed that the Superintendent was viewed as a critical support to the school leadership team members. Her actions, like those superintendents of districts where student achievement was increasing studied by McLaughlin and Talbert (2003) reported that focused on:

- communicating a vision of the school as a learning organization,

- modeling data-based decision making at the district level,

- building the capacity of school-based administrators to lead for learning, and

- providing resources and technical support to schools.

7. Leadership is Critically Important

Finally, the HCPS experience confirms that improvement requires strong leadership for the district and for schools. Leaders must establish a clear focus on learning, build professional communities, act strategically, create coherence, and build relationships and interact within the external environment.

Building the capacity of the school system to respond to the demands of NCLB for continuous improvement in student learning must to start with an understanding of the change process and a clear focus on leadership and instructional support to re-create schools as learning organizations. The NCLB timetable and the needs of teachers and administrators demand both immediate and long-range intervention by leadership at all levels. The HCPS experience confirms the importance of such leadership.

> The leader's new work for the future is **building learning organizations** where people continually expand their capacities.
> (Michael Fullan, 2001, 2003)

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XI. Contributors to this Volume of Design Principles for Learner Centered Schools

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Dr. Haas is a graduate of the University of Delaware who holds a Master's degree from Johns Hopkins University. She completed her is a doctoral studies at the University of Maryland, College Park. Dr. Haas taught in Harford public schools for 13 years before becoming an Assistant Principal at Prospect Mill Elementary in 1990. She served as principal at Edgewood Elementary School for five years and was promoted to be Assistant Superintendent for Education Services in July 1997. Mrs. Haas was named Interim Superintendent on March 16, 1998 and was reappointed for the 1998-99 school year June 8, 1998. On November 9, 1998, the Board of Education of Harford County unanimously appointed Mrs. Haas to be Superintendent of Harford County Public Schools. Her first four-year term was from July 1, 1999 through June 30, 2003. On July 1, 2003 she began a second four-year term.

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The Design Principles for Learner Centered Schools Series

This volume of Design Principles for Learner Centered Schools is the fourth prepared for CEASOM by Dr. Mawhinney and her teams of graduate students from the Department of Education Policy and Leadership at the University of Maryland.

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Teachers' Perceptions of Collective Efficacy and School Conditions for Professional Learning

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Abstract: As educators look for approaches to school improvement that can help all students reach high levels of achievement it is timely and important to examine how districts can develop approaches to increasing the instructional capacities of their schools. The purpose of this article is to report on research conducted by Harford County Public Schools, a mid-sized district in a suburban region of Maryland, U.S.A., to develop effective strategies for supporting the development of professional learning communities that took into account existing collective efficacy beliefs of the districts' teachers

Background

In a recent study researchers reported that school districts in the United States are developing intensive sets of locally designed strategies to address the requirements of implementing the *No Child Left Behind Act* (*NCLB*) (Center for Education Policy, 2004). This is not surprising because under this federal legislation, districts must demonstrate that they have met a number of performance requirements. However, districts now report that in order to meet the performance requirements of *NCLB*, they seek to identify exemplars of success and the research-based factors that explain their effectiveness.

In this article we report on research undertaken to support the efforts of the Central Instructional Leadership Team (CILT), led by the superintendent of Harford County Public Schools (HCPS), a suburban school district in Maryland, to develop effective district strategies to support sustained school improvement. District efforts occurred in the context of planning that occurred for the submission of a required Master Plan as set forth in State law. This Master Plan described strategic actions that were projected to support the District meeting all requirements of *NCLB*. These requirements included

accountability elements for academic achievement, school safety, teacher qualifications, and the obligation to provide high quality professional development to all teachers.

District Theory of Action

As part of responding to NCLB requirements for districts to develop strategies for high quality teacher professional development, the superintendent examined research on the reform initiatives of other districts, and established a framework for district actions to build instructional leadership capacity through professional development. The resulting theory of action included elements aligned with NCLB requirements identified in current research as "high quality" professional development. The theory of action was designed to take into account evidence of the influence of workplace conditions and workplace culture on teachers' practice, and consequently on student outcomes (Darling-Hammond, et al. 2002; Hall & Hord, 2001; Hord, 2000; Morrissey, 2000).

A number of promising strategies were developed as part of the theory of action for system improvement identified through examination of research taking two different perspectives on the organizational context required to develop teachers' instructional capacities. One group of researchers has explored the conditions supporting the development of school-based professional learning communities (Hippman & Huff, 2003; Hord, 1997, 2000, 2004; Morrissey, 2000). A second group of researchers studied how schools can be organized to foster collective efficacy beliefs among teachers (Gibson & Dembo, 1984; Goddard, 2001, 2002, 2003; Goddard et al, 2000, 2004).

Collective Efficacy Beliefs

School and district leaders seeking to understand these facets of motivation should examine the recent and growing body of research on the effect of self efficacy beliefs on the goals that individuals set for themselves, how much effort they expend, how long they persevere in face of difficulties, and their resilience to failures (Bandura, 1993, 1997). Over the past two decades researchers have consistently reported strong connections between teacher efficacy and teacher behaviors that foster student achievement (Gibson & Dembo, 1984; Tschannen-Moran et al, 1998). Their research has also revealed the importance of collective efficacy, reflecting the shared beliefs of capability of teachers and administrators that the efforts of the faculty as a whole will have a positive effect on students (Hoy & Miskel, 2005).

Collective efficacy is a cultural property of schools that reflects a collective set of beliefs that have a differential effect on student achievement (Bandura, 1993, 1997). Perceived collective efficacy is a construct derived from social cognitive theory that is based on the assumption that *"the choices that individuals and organizations (through the actions of*

individuals) make are influenced by the strength of their efficacy beliefs" (Goddard et al, 2004, p. 4). The basic assumption of social cognitive theory is that that human agency concerns the ways that people exercise some level of control over their own lives. Bandura (1997) argues that personal agency operates within a broad network of sociostructural influences. Within this network, when collectives choose to intentionally pursue a course of action, their actions reflect the exercise of organizational agency.

Sources of Collective Efficacy Beliefs

Although perceived personal efficacy and perceived collective efficacy differ in their unit of agency, Bandura (1997, p. 478) argues, *"in both forms efficacy beliefs have similar sources, serve similar, functions, and operate through similar processes".* Bandura (1986, 1997) identifies four sources of efficacy formation: mastery experience, vicarious experience, social persuasion, and affective state.

Mastery experience, the perception that a performance has been successful tends to raise efficacy beliefs, in turn contributing to the assessment that similar proficiency can be expected in the future. Efficacy beliefs arising from mastery experiences are enhanced when attributions of success are made to controllable causes rather than to luck or external influences. Mastery experiences are associated with organizational learning, reflecting the phenomenon of that through the learning of group members, organizational learning occurs. However, if learning produces success to easily, when inevitable difficulties arise, failure is likely to be discouraging. Goddard et al (2004, p. 5) observe, *"a resilient sense of collective efficacy requires experience in overcoming difficulties through persistent effort".* Research by Goddard (2001) provides evidence of these effects of mastery experience. In a study of school reading achievement, he found that mastery experience (prior school reading achievement) was a significant positive predictor of differences among schools in perceived collective efficacy, more than aggregate measures of school measures and socioeconomic status.

Skills modeled by others provide vicarious experiences that influence collective efficacy beliefs. These beliefs are enhanced when observers identify those who performance is successful. How observational learning occurs in organizations has not yet been fully explored, although, there is some evidence that organizations may learn from others provided those organizations have achieved valued outcomes.

Social persuasion, exercised through encouragement or feedback concerning particular performances, depends on the credibility, trustworthiness, and expertise of the persuader (Bandura, 1996). Goddard et al (2004, p. 6) argue that

> *at the group level, social persuasion is a way of conceiving the ongoing socialization that organizational participants interdependently create and experience. Collective efficacy perceptions serve as normative expectations for goal attainment. A robust sense of group capability establishes a strong press for collective performance. . . In schools possessed b y a high degree of perceived collective efficacy, new teachers learn that extra effort and educational success*

are the norm. In turn, these high expectations for action create a normative press that encourages all teachers to do what it takes to excel and discourages them from giving up when faced with difficult situations.

Goddard et al (2004) also postulate that affective states may influence how organizations interpret and react to changes that they face. Thus, schools with organizational cultures framed by the robust collective efficacy beliefs of faculty may tolerate the pressures and crises that are now associated with high stakes accountability without debilitating consequences.

Elements of Collective Efficacy

The major influences on collective efficacy are assumed to be the analysis and interpretation of the four sources of information that we have just outlined: mastery experience, vicarious experience, social persuasion, and emotional state. Goddard et al (2000, p. 9) point out that in schools the processes of analysis and interpretation focus organizational attention on two related domains: the teaching task and teaching competence. They postulate that *"perceptions of a group capability to successfully educate students result when teachers consider the level of difficulty of the teaching task in relation to their perceptions of group competence."*. They further suggest that this process occurs at both individual and school levels as *"teachers analyze what constitutes successful teaching in their school, what barriers or limitations must be overcome, and what resources are available to achieve success"*. Goddard and his colleagues (2000, p. 10) further argue that teachers conduct their analysis of the teaching task *"in conjunction with their assessment of the teaching competency of the faculty…At the school level, the analysis of teaching competence produces inferences about the faculty's teaching skills, methods, training, and expertise [and may also include] positive faculty beliefs in the ability of all children in their school to succeed"*.

In developing the Collective Efficacy Scale, Goddard et al (2000, p. 10) also postulated, *"Because these analyses of task and competence occur simultaneously, it is difficult to separate these two domains of collective teacher efficacy. They interact with each other as collective efficacy emerges"*. Goddard and his colleagues theorized that the consequences of high collective teacher efficacy would be the acceptance of challenging goals, strong organizational effort, and a persistence that leads to better performance. Conversely, lower collective teacher efficacy leads to less effort, the propensity to give up, and a lower level of performance.

Research on Collective Efficacy Beliefs

The recent research interest in collective efficacy beliefs is based on emerging evidence suggesting that they are linked to group goal attainment. Several studies have shown a strong link between perceived collective efficacy and differences in student achievement among schools (Bandura, 1993, 1997; Goddard, 2001, Goddard et al., 2000). Goddard and his colleagues (2004, p. 8) found that *"perceptions of collective efficacy directly affect the diligence and resolve with which groups choose to pursue their goals. Hence*

perceived collective efficacy is a potent way of characterizing the strong normative and behavioral influence on an organization's culture".

Hoy and Miskel (2005, p. 179) point out that research shows *"a strong school culture of efficacy seems to promote high student achievement, in part, because it leads to the acceptance of challenging goals, strong organizational effort, and a persistence that leads to better performance".* The opposite effect has also been found, so that lower collective efficacy seems to lead to less, effort, the propensity to give up, and a lower level of performance. Significantly for school districts faced with the sanctions imposed by NCLB as a result of lower school performance, once established, collective efficacy beliefs are hard to change. Researchers have found that analyses of teaching tasks and assessments of teaching competence that are the basis of estimations made by teachers in forming collective efficacy beliefs are likely to remain unchanged unless something dramatic occurs.

A key lesson for school and district leaders is that a school culture of efficacy is a relatively stable property that requires substantial effort to change. Goddard et al (2004) suggest that the determinants of collective efficacy may be found within the organizational context of the school. If this so then, there are some potentially promising directions to be taken in creating cultural change that can be gleaned from research into the collective context in which teachers engage in professional learning. Hord (1997), Morrissey (2000) and Massell (2000) all report that the most promising approaches to creating school cultures with norms of continuous improvement focus on the development of professional learning communities (PLCs).

Professional Learning Communities

Researchers studying the conditions of professional learning that promote and support the development of teacher instructional capacity identified several foundational aspects of the organizational arrangements in schools that are viewed exemplars of professional learning communities (Hippman & Huff, 2003; Hord, 1997, 2000, 2004; Morrissey, 2000). Those researchers use the term 'professional learning community' (PLC) to describe a school that operates in a way that engages the entire group of professionals coming together for learning within a supportive self-created community. In these settings teachers and school leaders come together to interact, test their ideas, challenge their inferences and interpretations, and process new information with each other.

Research focus on professional learning communities is a relatively recent phenomenon. Researchers originally focused on identifying conditions in schools conducive to change. In 1992 Boyd identified seventeen indicators that were highly indicative of a context in which change was likely to be initiated and sustained. The original indicators identified by Boyd were later clustered into four functional groupings (Boyd & Hord, 1994): 1) reducing isolation; 2) increasing staff capacity; 3) providing a caring, productive environment; and 4) promoting increased quality.

The first cluster, reducing isolation, was related to changing schedules, school structures, policies and practices associated with communication and collaboration, and increasing the sense of collegial relationships within the faculty. The second cluster, increasing staff capacity, pertains to creating conditions that increase teacher autonomy, improve staff development and decision-making, and increase the availability of resources. The third cluster, providing a caring productive environment, focuses on creating positive teacher and community attitudes, fostering the development of caring relationships, increasing motivation, and forming networks of partnerships to work on improved achievement. The final and fourth cluster, promoting increased quality, relates to creating the conditions to support continuous inquiry and improvement, and developing cultural practices to foster common vision and purpose among members of school communities.

Hord (1997) studied Boyd's indicators and the clusters developed from these indicators and concluded that PLCs are schools in which staff operate along the continua of the five dimensions: 1) shared values and vision; 2) collective learning and application; 3) supportive and shared leadership; 4) supportive conditions; and 5) shared personal practice. In addition she found that a fundamental characteristic of a PLC is its strong and unwavering focus on student learning.

Shared Values and Vision

Hord defines a shared vision as a strong mental image of what is important to the individuals and the organization (Hord, 1997; Hall & Hord, 2001; Hord, 2004). The shared values and vision guide the staff and leadership decisions about teaching and learning, and support the norms and behaviors in the school and district community. The values and vision are embedded in the day-to-day actions of teachers and administrators. While staff are encouraged to get involved in defining and sustaining the vision, they hold themselves responsible to make all decisions on the basis of the vision and values. School or district leadership is responsible for repeatedly communicating and sustaining the vision throughout the organization. In an organization that functions as a PLC, the common good is "*on a par with personal ambition*" (Hord, 2004, p. 9).

Collective Learning and Application of Learning

Professional learning communities engage school staffs in processes that collectively seek new knowledge and processes. Problems are addressed through the collegial relationships and investigations that promote new knowledge and learning that can be applied to the day-to-day issues of student learning in the classroom. Schools that operate with this form of PLCs go far beyond issues of schedule, discipline, and fund raising to address the issues at the core of their mission – student learning. Hord (2004, p. 9, emphasis in original) states, *"Such collaborative work is grounded in reflective dialogue or inquiry, where staff conduct conversations about students and teaching and learning, identifying related issues and problems"*. The inquiries inherent in this culture allow teachers and administrators to apply new information to problem solving, and therefore work to provide new conditions for addressing the needs of students. In these

environments educators apply the most effective pedagogy to the instruction of their students and take responsibility for the learning of each and every student.

Supportive Conditions

Morrissey (2000, p. 8) argues *"creating supportive structures, including a collaborative environment, has been described as the 'single most important factor' for successful school improvement and 'the first order of business' for those seeking to enhance the effectiveness of their school"*. Hord (1997) identified the two kinds of supportive structures within a school that operates as a PLC as structural conditions and relationships.

Examples of structural conditions that must be addressed to create PLCs include use of time, communication procedures, size of the school, proximity of teachers to each other. Structural conditions must also ensure that teaching roles are interdependent, teachers feel empowered, and professional development processes are appropriate to teacher needs.

Aspects of supportive conditions that are relevant to relationships are meant to capitalize on the human capacities of the individuals within the organization. Examples of supportive structures that foster productive relationships include positive educator attitudes, shared vision and sense of purpose, willingness to accept feedback, strong cognitive skills, norms of continuous inquiry and improvement, respect, trust, and positive, caring relationships. Hord (2004, p. 10) claims, *"Supportive conditions determine when, where, and how the staff regularly come together to do the learning, decision-making, problem solving, and creative work that characterize a professional learning community"*.

Principals can provide aspects of both structural and relationship elements of PLCs. The functioning of the PLCs within the organization will be further enhanced if various district and community groups are supportive of the PLC structure as well. The elements under this dimension seem most clearly related to many of the indicators identified by Boyd (1992).

Supportive and Shared Leadership

The transformation of a school into a PLC requires more distributed leadership and joint learning with the staff and administration equally engaged. Within a school PLC, all staff must work and grow together to achieve jointly defined learning goals for staff and students. Hord (2004, p. 8) argues, *"Administrators, along with teachers, must be learners: questioning, investigating, and seeking solutions for school improvement and increased student achievement"*. Hord believes that schools can get a great deal accomplished if shared leadership is nurtured within a school. People in positions other than formally recognized leadership must be encouraged to provide leadership and direction in addressing the needs of students and staff.

Shared Personal Practice

Elmore (2000, p. 17) states *"schools and school systems that are improving directly and explicitly confront the issue of isolation"*. In the schools studied by Hord (1997, 2000), and Morrissey (2000) teachers had time to share their views and knowledge about professional aspects of teaching. Similarly, Elmore (2000, p. 2) reports that schools can improve by *"creating multiple avenues of interaction among educators and promoting inquiry-oriented practices while working toward high standards of student performance"*. Morrissey (2000) also reports that while shared personal practice is a critical aspect of PLCs it is often the last dimension to be developed. Darling-Hammond (1998) reports that teachers who spend time sharing their expertise are more effective in developing higher-order thinking skills in their students and are more effective in meeting the diverse learning needs of today's students.

Research on Conditions Required for the Development of Professional Learning Communities

In recent years a number of studies have been conducted to examine the conditions that foster development of the five dimensions of PLCs focused on individual schools that successfully improved student achievement. Hord (1997, 2000, 2004), and the SEDL group (Morrissey, 2000; Hippman & Huff, 2003) conducted case studies on individual schools, identifying significant foundational factors, the presence of which contributed to PLC success, and the absence of which often presaged difficulty or failure in PLC implementation. Trust is essential to the development of PLCs. So also are conditions that enable teachers' voices to be heard, and provide opportunities for open discussions about the impact of programmatic changes on teachers work. These foundational factors were highly focused on factors in the teachers' workplace that supported their ongoing learning and their efforts to make improvements in classroom practices. Hall and Hord (2001, p. 197) elaborate:

> *Such support was manifested as teachers worked together, sharing their craft and wisdom, learning from each other, and collaborating on problems and issues of concern to them. This support increased teacher efficacy, which meant that they gave more attention to students' needs and adopted new classroom behaviors more readily.*

Notably, Hord and Hall's comments point to their claim that there is a possible relationship among supports created in professional learning communities and increases in teacher efficacy beliefs. Hord and Hall further postulate that increased teacher efficacy is likely to result in increased teacher attention to student needs and changes in teaching practices. These propositions provided an initial direction for our secondary analysis of the HCPS survey of the faculty perceptions of school readiness for professional learning and their collective efficacy beliefs. We next describe the analytic framework that guides our analysis.

Guiding Analytic Framework

Our analysis is framed within the context of the theory of action that we believe best reflects the underlying premises guiding the district's efforts to develop professional learning communities. Figure 1 presents this theory of action.

Insert Figure 1 About Here

Figure 1 suggests that district strategic actions enact transformation of teaching learning process in schools across the district by setting bureaucratic expectations, creating shared orientations, mediating power relations and addressing individual cognition and motivation. These district efforts should increase instructional leadership capacity, and in so doing mediate teachers' perceptions of the readiness of schools to become learning organizations.

We assume that increases in instructional leadership capacity occur in the context of considerations of the characteristics of teachers in schools served by instructional leaders. We also assume that teachers in elementary, middle and high schools may perceive the readiness of their schools in different ways. We hypothesize that teachers' perceptions of schools as learning organizations are related to their collective efficacy beliefs, and that both are influenced by the context of high stakes accountability. This influence we believe mediates the influence on student achievement of teacher efficacy beliefs and perceived readiness for professional learning.

Data Sources

In order to gain an understanding of existing organizational cultures, the district undertook an initial investigation of the relationships between teachers' perceptions about collective efficacy, and their beliefs about their influence upon decision-making, the focus of the school upon student achievement, the nature and frequency of staff interactions around learning, opportunities for teachers to observe one another's classes and provide feedback, and the resources and conditions available in the school to facilitate staff communication and trust. As a first step in developing these strategies, in August 2003, all teachers (N=2,448) and administrators (n=117) employed in the 49 district schools (31 elementary, 9 middle, 8 high) Harford County Public Schools were surveyed to determine their perceptions of school conditions supporting professional

learning, and their perception of several indicators of collective efficacy beliefs (see Appendix 1 for the Conditions for Professional Learning Survey).

The School as Learning Organization Survey (SLO) (Hord, 1997) was administered to teachers and administrators in each of the 49 district schools. The survey also asked teachers to indicate their school, grade level taught, gender, and years of teaching experience. Appended to the 17 SLO indicators were four items taken from the Collective Efficacy Scale (Goddard, 2002) designed to measure key aspects of collective efficacy beliefs (CE-Scale).

Student achievement was measured as the percent of students in the school achieving a rating of Proficient or better in reading and mathematics on the Maryland School Assessment (MSA), a standardized statewide measure of reading and mathematics skills used to calculate school AYP. Two separate analyses were performed, one for reading and one for mathematics.

Results

Cronbach Alpha Reliabilities

Table 1 displays the Cronbach Alpha reliabilities and associated statistics for the five dimensions of the SLO and for the items selected from the CE-Scale to capture the interaction of Task Analysis and Group Competency assessment for the 49 schools. The number of teachers who completed all 20 items is presented in the third column. The Alpha reliabilities for the dimensions ranged from .93 for the 17 PLC items, to .74 for the 3 CE-Scale items.

Insert Table 1 About Here

Analysis of responses to the four items selected from the CE-Scale indicated that one item of the four items appeared to be unrelated to the other three. This item, which asked teachers to indicate their level of agreement on the six point Likert scale to the following statement: Teachers *here need more training to know how to deal with difficult students*. Principal components analysis of the remaining three items produced a single eigenvalue that accounted for 66.9% of the variance. The Alpha reliability for the remaining three items CE-Scale items was .75, lower than that reported by Goddard in field-testing the CE-Scale (.96). A total CE score was computed by summing the three related items. Two of these items loaded on both General Competence and Task Analysis components of

collective efficacy, reflecting the tendency for teachers to engage in the cognitive processes of considering one component in light of the other and visa versa.

Teachers' Perceptions of Professional Learning Community Readiness and Collective Efficacy Beliefs

The descriptive statistics providing means and standard deviations of teachers' ratings on 5 point Likert scales for the five dimensions of PLCs and the summed CE items are presented in Table 2 (All levels, Elementary) Table 3 (Middle, High School). Mean ratings of teachers in elementary schools were higher for all five PLC dimensions and for Collective Efficacy Beliefs. Associated standard deviations were lower. Data presented in these tables suggest that teachers' perceptions of collective efficacy and school readiness for professional learning communities are related to school level. In general, elementary school teachers appear to perceive high collective efficacy and a school culture more conducive to supporting a professional learning community than middle and high school teachers. Furthermore, perceptions generally tend to be more diverse among secondary (middle and high) compared to elementary school teachers.

Insert Table 2 and Table 3 About Here

We also explored the relationships between collective efficacy beliefs and perceptions of conditions of readiness as a professional learning community. Our analysis of correlations, presented in Table 4, suggests HCPS teachers' perceptions of collective efficacy and their perceptions of conditions supporting professional learning communities are moderately or substantially related, and all are positive. All correlations are significant at the .01 level. The lowest correlation was between collective efficacy and shared personal practice (.18), however, the two other lowest correlations were also with the dimension shared personal practice (with shared leadership .27, and with shared vision and values .29). A similar phenomenon was found during in the field-testing of the instrument by Meehan, Orletsky and Sattes.

Insert Table 4 About Here

Table 4 also shows that, ignoring correlations between separate dimensions and the PLC total score, the majority of the intercorrelations were moderate, being in the .40s -.70s. This suggests that teachers who perceive their schools to be characterized by shared leadership, focused vision, collaborative work, shared observation, and supportive conditions also perceive their colleagues to be effective in bringing about student learning.

Differences in Teacher Characteristics and Perceptions of Collective Efficacy Beliefs

We were also interested in examining the relationship between collective efficacy beliefs and variables including teacher gender, years of experience, and school assignment (elementary, middle, and high school). Analysis of variance performed on the CE scores indicated that teachers' perceptions of collective efficacy are related to levels: elementary teachers perceiving higher collective efficacy than middle and high school teachers. Table 5 presents the analysis, showing that there was a significant differences in teacher CE beliefs between levels.

In addition correlations between teachers' self reported years of experience in teaching, years of experience in school, gender, and perceptions of collective efficacy were also calculated. The correlation between collective efficacy and gender was small, but statistically significant ($r = .12$, $p < .00$), suggesting that females perceive higher levels of collective efficacy than males. The correlations between collective efficacy beliefs and teaching experience are, however, negligible ($r = .05$, $p < .01$), suggesting that individuals who remain in the profession longer are no more likely than novice teachers to perceive their colleagues as effective. Additionally, teachers who remained in the same school for a long period of time were no more likely than new teachers to perceive their colleagues (in that school) as effective ($r = .03$, $p < .01$).

Insert Table 5 About Here

Relationships between Collective Efficacy Beliefs, Perceptions of Professional Learning Community and Student Achievement

Our analytic framework proposes that there are relationships between collective efficacy beliefs, perceptions of school conditions for professional learning communities, and student achievement. We examined these relationships in a regression analysis performed with school mean scores. Student achievement was measured as the percent of students in the school achieving a rating of Proficient or better in reading and mathematics on the Maryland School Assessment (MSA), a standardized statewide measure of reading and mathematics skills used to calculate school AYP. Two separate analyses were performed, one for reading and one for mathematics. Both analyses included only elementary school data.

In the first regression analysis, student proficiency on the 2004 MSA reading test served as the dependent variable. Predictor variables included the previous year's percent at proficient, the percent of students in the school eligible for FaRMS (an index of student poverty), the percent of teachers holding an Advanced Professional Certificate (a proxy for highly-qualified teachers), the school mean score on the SLO survey, and the school mean on the CE-Scale items used in the HCPS survey.

Table 6 indicates that only two variables, previous year's proficiency and collective efficacy beliefs, are significant predictors of current reading proficiency among elementary schools.

Insert Table 6 About Here

A similar analysis was done for mathematics. Table 7 indicates that none of these variables predicted current levels of proficiency in mathematics.

Insert Table 7 About Here

These findings suggest that the relationship between perceptions of professional learning communities and student achievement are not easy to disentangle from the context of schools, where differences in socioeconomic and minority status of students are strongly related to student achievement. The finding of a significant relationship between collective efficacy beliefs and student reading achievement in these analyses suggests that these relationships should be examined more extensively, as we do in the next sections of this article.

Collective Efficacy Belief Effects on Student Achievement at the School Level

To further explore these effects we undertook analysis of responses aggregated to the school level to determine the nature and direction of the relationship among the following:

- Student (%FaRMS and % Not White) and teacher characteristics (Mean Years Teaching, % Not Highly Qualified) and Student Achievement (% proficient in reading and mathematics);
- Collective efficacy beliefs and teacher characteristics, including mean years of teaching experience of teachers, and teacher qualification status- as defined by Maryland requirements for teaching in subject areas;
- Student characteristics (% FaRMS, % non White Students) and collective efficacy beliefs; and
- Student achievement outcomes and collective efficacy.

The results of our analysis of these relationships are presented in Figure 2. Here we show that as expected, student achievement, especially in reading is strongly associated with student demographics, poverty and race. The relationships for mathematics are in the

same direction, but weaker. There is also a direct relationship between teacher qualifications and student achievement in both mathematics and reading. Again, however, the relationships are hard to interpret because not highly qualified teachers are more likely to be teaching in schools with higher concentrations of poverty and minority students.

Insert Figure 2 About Here

We also show that, as predicted, collective efficacy beliefs are associated with student achievement. The association, however, appears to be stronger in mathematics. Student characteristics, on the other hand seem to be a more important for reading achievement. Since mathematics is more closely associated with the quality of instruction (which students can learn on their own), this finding is in keeping with expected results.

We also considered the nature and direction of the relationship between student characteristics and collective efficacy. The direction of the relationship between the two indicators of the group of students served (socioeconomic status -% FaRMS, and majority race/ethnicity and teachers' collective efficacy beliefs is as predicted. Teachers teaching in schools with high student poverty perceive less collective efficacy and teachers in schools with a higher proportion of White students perceive greater collective efficacy in their schools. However, we note that we found a statistically significant relation between the per cent of not highly qualified teachers and the per cent White students (r=-.22, p<. 003), and a positive (but not significant) relationship between the presence of not highly qualified teachers and high poverty students (r=. 17), suggesting that it could be the combination of challenging students (high poverty, non White), and less qualified teachers that combine to reduce the level of collective efficacy beliefs.

We found to be indeterminate the magnitude of the relationship between collective efficacy and two characteristics of the teaching staff: experience (measured as total years spent in teaching) and qualifications (measured by the percent of teachers not meeting state requirements for "highly qualified." Although our small sample size (N=49) complicates our analysis, there does appear to be at least a moderately positive relationship between qualified teachers in the school and collective efficacy beliefs.

Contribution of Collective Efficacy Beliefs to Addressing Socioeconomic and Minority Status Conditions Affecting Student Achievement

One of the most important policy concerns that we wished to address in this study was whether collective efficacy beliefs predict student achievement, as other researchers have found. If they do, then questions of how such beliefs can be fostered become more salient when designing approaches to teacher professional growth and development.

In further exploring the relationship between collective efficacy beliefs and student achievement, we asked the following question: Do collective efficacy beliefs predict student achievement, when SES and race are controlled? In order to address this question we conducted two analyses. In the first analysis our guiding question was: Is the relationship between collective efficacy beliefs and student achievement affected by student characteristics such that in certain contexts, for example in schools where there is a high proportion of FaRMS eligible students, are collective efficacy beliefs are more or less important?

To address this question we examined the relationships between collective efficacy beliefs and reading achievement across all grades controlling first for FaRMS and then for Minority Enrolment. We conducted the same analysis for mathematics.

Figure 3 presents our findings. It shows that when FaRMs is controlled, collective efficacy beliefs contribute moderately to reading achievement ($r=.35$, $p<.05$). However, collective efficacy beliefs contribute substantially to mathematics achievement when FaRMs is controlled ($r=.73$, $p<.01$). There is no effect of collective efficacy beliefs on reading achievement when minority enrolment is controlled, but there is a significant effect of collective efficacy beliefs in mathematics when minority enrolment is controlled ($r=.71$, $p<.00$).

Insert Figure 3 About Here

Discussion

Review of District Theory of Change

The HCPS – CILT found the research on PLC's to be a useful framework for developing the district's strategies for improving instructional capacities in schools. However, the CILT also recognized that their efforts to support the development of PLCs must take into account the effect on teachers of the pressures created by NCLB requirements that students of all subgroups demonstrate Adequate Yearly Progress. With this recognition, the CILT turned for guidance in developing the HCPS strategies to research on teachers' collective efficacy. CILT members recognized that with increased school accountability for student performance, it has become important to address teachers' knowledge and commitment to helping all children to master the curriculum.

This commitment is demonstrated most clearly by teachers' persistence and perseverance in working with "difficult" or "struggling" students. Teachers' sense of efficacy, their belief that they can bring about learning, has been shown to predict their classroom performance. In refining strategies to support the development of cultural conditions essential to school-based professional learning communities, the HCPS- CILT took into account the conclusion reached by Goddard et al (2004, p. 8) that knowledge about collective efficacy beliefs is *"critical to understanding the influence of school culture on teachers' professional work and, in turn, student achievement"*.

Review of Findings

In the analysis we have reported in this article, we have attempted to increase knowledge about these relationships. Analysis of correlations revealed that teachers' perceptions of collective efficacy and conditions for professional learning communities are related to school level. In general, elementary teachers appear to perceive higher collective efficacy and a more positive school culture for professional learning communities to develop than do middle and high school teachers. Furthermore, perceptions generally tend to be more diverse among secondary compared to elementary school teachers. Analysis of variance performed on the CE scores supports that finding. A post-hoc comparison of group means indicated that all three groups were significantly different from one another.

Correlations between teachers' self-reported years of experience in teaching, years of experience in the school, gender, and perceptions about collective efficacy were also calculated. The correlation between collective efficacy and gender was small but statistically significant (r=.12, p<.00), suggesting that females perceive higher levels of collective efficacy than males. The correlations between perceived collective efficacy and teaching experience, however, was negligible (r = .05, p<.01), suggesting that individuals who remain in the profession longer are no more likely than novice teachers to perceive their colleagues as effective. Additionally, teachers who remained in the same school for a long period of time were no more likely than new teachers to perceive their colleagues (in that school) as effective (r = 0.03, p<.01).

Teachers' perceptions of collective efficacy and their perceptions of professional learning community readiness are moderately or substantially related. This suggests that teachers who perceive their school to be characterized by shared leadership, focused vision, collaborative work, shared observation, and supportive conditions also perceive their colleagues to be effective in bringing about student learning.

Finally, relations between collective efficacy beliefs and perceptions of professional learning community readiness and student achievement were examined in a regression analysis performed with school mean scores. Student achievement was measured as the percent of students in the school achieving a rating of Proficient or better in reading and mathematics on the Maryland School Assessment, a standardized statewide measure of

reading and mathematics skills used to calculate school AYP. Two separate analyses were performed, one for reading and one for mathematics. Both analyses included only elementary school data. In the first regression analysis, student proficiency on the 2004 Reading Test served as the dependent variable. Predictor variables included the previous year's per cent at proficient, the per cent of students in the school eligible for FARMS (an index of student poverty), the per cent of teachers holding an Advanced Professional Certificate (a proxy for highly-qualified teachers), the school mean score on the Professional Learning Community Survey, and the school mean score on the Collective Efficacy scale.

We found only two variables, previous year's proficiency, and collective efficacy, to be significant predictors of current reading proficiency among elementary schools. None of these variables predicts current levels of proficiency in mathematics.

Significance and Implications

Analysis of the survey of teachers' perceptions of conditions conducive to professional learning communities and their collective efficacy beliefs support the findings of Goddard and his colleagues (2000, 2004). Goddard et al (2000), for example, found that even after controlling for students' prior achievement, race/ethnicity, SES, and gender, collective efficacy beliefs have stronger effects on student achievement than student race or SES. This was true only in the case of reading achievement in the HCPS survey. Significantly the HCPS study supports Goddard's (2001) hypothesis that the perception that a performance has been successful tends to raise efficacy beliefs. He found that mastery experience, defined, as prior school reading achievement, was a significant positive predictor of differences among schools in perceived collective efficacy.

Significantly the HCPS study found correlations between teachers' perceptions of conditions conducive to professional learning communities and their perceptions of collective efficacy in their schools. This evidence provides support for the general conclusion reached by Goddard et al (2004, p. 8) that *"teachers' sense of efficacy is positively related to aspects of organizational context such as positive school climate, lack of impediments to effective instruction, teacher empowerment, as well as principal influence with superiors and the academic press of a school"*.

Concluding Comments

Many observers claim that the pressures of *NCLB* on districts, schools and their faculties create exactly the kind of shock that leads to reassessments of collective efficacy beliefs. Theories of collective efficacy suggest, however, that such stresses can lead to dysfunctional organizational activity, if a faculty has not had mastery experiences to

sustain their effort and persistence, or if they are not subject to social persuasion, or provided with vicarious opportunities to learn.

We have argued that such experiences are likely to occur in professional learning communities. We have also shown that even before the Central Leadership Team of Harford County Public School began to make concerted effort to foster their development, teachers' perceptions of conditions of PLC readiness in their schools were found to be related to their collective efficacy beliefs. Our analysis also suggests that at least prior to any strategic actions by the district to foster PLCs there was considerable variability among schools in the strength of this correlation. Low achieving schools appear to be likely beneficiaries of strategic actions by districts to transform its cultural system.

At the same time we are cautious in claiming that such transformations are simple. We agree with Hipp and Huffman's (2003, p. 5) that:

> *Staffs that prevail [in establishing PLCs] usually move to the institutionalization phase, where the change initiative becomes embedded into the culture of the school. Guided by a shared vision the school community is committed and accountable for student learning. They do so by identifying and solving problems amid a climate that invites risk and therefore continual refocusing. . . . Our belief is that institutionalization across the five PLC dimensions is essential for schools to engage in sustained improvement and for continuous learning to occur.*

Our analysis suggests, however, that such discussions should be undertaken after careful analysis of teachers' conceptions of collective efficacy in schools. We have shown that teachers' perceptions of collective efficacy do appear to predict student achievement. Such relationships have not yet been found between their perceptions of school PLC readiness, not withstanding the correlations that appear to exist between collective efficacy beliefs and PLC readiness perceptions. These correlations point to important direction for further research on relationships between the strategic actions that districts like HCPS are now taking to develop school-based professional learning communities and the sources of collective efficacy beliefs that have been identified.

Our analysis suggests that correlations exist among dimensions of PLCs and the set of three CE items used in the HCPS survey to represent the reciprocal analysis that teachers' make of teaching tasks and group teaching competence. We believe that further examination of these relationships through in depth qualitative case studies may provide both researchers and districts with more robust understanding of the sources of collective efficacy beliefs that are embedded in teachers' experiences in professional learning communities. Such research would contribute to the further development of theoretical formulations of the effects of both collective efficacy beliefs and their sources in professional learning communities.

There are significant implications of such research for school districts that seek to initiate, support, and sustain transformational processes that change the systemic context in which teaching and learning occurs in schools. In order to create the conditions to support the development of school based professional learning communities districts must transform structural systems by revising bureaucratic expectations, creating roles and expectations that set official targets for action. However, individuals also make sense of organizational structures through cognitive processes in which they create meaningful, coherent representations of teaching tasks and group capacities. Our findings, therefore, also suggest that in order to support conditions for collective efficacy beliefs to develop, districts must also find ways to transform the context in which individuals experience organizational structure and culture. Research is needed to support districts in this endeavor.

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Figure 1: Analytic Framework

Maryland's Performance Assessment System
Content Standards
Assessment Limits
Adequate Yearly Progress Sanctions

Elementary Student Achievement
%Proficient in Math
% Proficient in Reading

School Characteristics
Level
Elementary
Middle
High School

Perceptions of Schools as Learning Organizations
Shared and Supportive Leadership
Shared Values and Vision
Collective Learning and Application
Supportive conditions
Shared Practice

Collective Efficacy Beliefs

Student Characteristics
Socioeconomic Status (FaRMS)
Majority Race/Ethnicity
Mobility

District Strategic Actions to Enact
Transformation of Teaching
Learning Process
Set Bureaucratic Expectations
Create Shared Orientations
Mediate Power Relations
Address Individual Cognition and
Motivation

Increase Instructional Leadership Capacity
Central Instructional Leadership
School Instructional Leadership

Teacher Characteristics
Gender
Qualification Status
Years of Experience
Years at School
Subject/ Core/ Tested

Table 1

Cronbach Alpha Reliabilities for the Five Dimensions, the Collective Efficacy Items and

the Total Instrument for the Teachers in 49 Schools

Scale	Number of Teachers (N)*	Number of Items	Cronbach Alpha
PLC Total	17	2,188	.93
PLC Total + CE Items	20	2,164	.84
Principal's Facilitative Leadership	2	2,408	.86
Shared Visions for Improvement	3	2,364	.88
Collective Creativity and Learning	5	2,366	.88
Classroom Observations and Feedback	2	2,316	.82
School Conditions and Capabilities	5	2,339	.83
Collective Efficacy Beliefs**	3	2,380	.75

*This is the number of teachers who completed all items in the instrument, which is usually less than the number of teachers completing the items for the dimensions and set of collective efficacy items.

Table 2

All Levels of Teacher Perceptions of Schools as Learning Organizations and Collective Efficacy (N=2114)

	Mean	SD
Collective Efficacy	14.01	2.79
Shared and Supportive Leadership	7.25	1.58
Shared Values and Vision	11.96	2.10
Collective Learning and Application	18.82	3.20
Shared Personal Practice	5.52	2.02
Supportive Conditions	18.50	3.64
All PLC Dimensions	62.13	10.22

Elementary Teacher Perceptions of Schools as Learning Organizations and Collective Efficacy (n=1,021)

	Mean	SD	Min	Max
Collective Efficacy	14.99	2.32	13.20	16.21
Shared and Supportive Leadership	7.65	1.41	6.26	8.49
Shared Values and Vision	12.68	1.79	10.98	14.04
Collective Learning and Application	20.04	2.75	17.82	22.42
Shared Personal Practice	5.66	2.05	3.88	7.16
Supportive Conditions	19.66	3.57	16.77	21.83
All PLC Dimensions	65.70	8.59	56.35	71.89

Table 3

Middle School Teacher Perceptions of Schools as Learning Organizations and Collective Efficacy (n=460)

	Mean	SD	Min	Max
Collective Efficacy	13.83	2.81	12.30	15.16
Shared and Supportive Leadership	6.96	1.60	5.86	7.95
Shared Values and Vision	11.67	2.11	10.02	12.96
Collective Learning and Application	18.68	3.06	17.00	20.35
Shared Personal Practice	5.45	2.00	4.56	6.18
Supportive Conditions	18.42	3.57	15.61	21.14
All PLC Dimensions	61.19	10.32	53.12	68.37

High School Teacher Perceptions of Schools as Learning Organizations and Collective Efficacy (n=643)

	Mean	SD	Min	Max
Collective Efficacy	12.58	2.83	11.17	13.48
Shared and Supportive Leadership	6.95	1.62	5.51	7.89
Shared Values and Vision	11.10	2.17	9.48	12.17
Collective Learning and Application	17.19	3.38	15.12	18.45
Shared Personal Practice	5.26	1.94	4.55	5.80
Supportive Conditions	16.65	3.63	14.82	17.89
All PLC Dimensions	57.18	10.32	51.34	60.90

Table 4: Pearson product-moment correlations

Variable	All Level Teacher Perceptions of School PLC Readiness (N= 2,448)						
	Collective Efficacy	Shared and Supportive Leadership	Shared Values and Vision	Collective Learning and Application	Shared Personal Practice	Supportive Conditions	All PLC Dimensions
Collective Efficacy	1.0						
Shared and Supportive Leadership	.31*	1.0	.				
Shared Values and Vision	.41*	60*	1.0				
Collective Learning and Application	.44*	.55*	.71*	1.0			
Shared Personal Practice	.18*	.27*	.29*	.42*	1.0		
Supportive Conditions	.47*	.56*	.65*	.71*	.45*	1.0	
All PLC Dimensions	.48*	.70*	.81*	.89*	.60*	.89*	1.0

Table 5

Comparison of Elementary, Middle and High School Teachers' Perceptions of Collective Efficacy

Level	Mean	SD
Elementary	14.99	2.32
Middle	13.83	2.81
High	12.58	2.83

Source of Variance	Sum of Squares	df	Mean Square	F
Between (Level)	2529.38	2	1264.19	186.69**
Within	15780.61	2332	6.76	
Total	18310.00			

**p<.001 level

Table 6

Elementary Schools' Previous Reading Achievement, Student Socioeconomic Status, Teacher Quality, School Professional Learning Community Readiness and Collective Efficacy as Predictors of Student Proficiency in Reading
(n=1,021)

Predictors	Standardized Regression Coefficient	t
Previous Years Proficiency in Reading	.451	2.105*
PerCent FaRMS	-.137	0.688
Per Cent Qualified Teachers	.163	1.281
PLC Readiness	-.19	1.72
Collective Efficacy Beliefs	.350	3.36**

Table 7

Elementary Schools' Previous Mathematics Achievement, Student Socioeconomic Status, Teacher Quality, School Professional Learning Community Readiness and Collective Efficacy as Predictors of Student Proficiency in Reading
(n=1,021)

Predictors	Standardized Regression Coefficient	t
Previous Years Proficiency in Mathematics	.357	1.13
Per Cent FaRMS	-.433	1.54
Per Cent Qualified Teachers	-.012	.07
PLC Readiness	-.06	.41
Collective Efficacy Beliefs	-.043	.086

*p<.05
**p<.002

Figure 3: Variables Related to School Achievement

Reading Achievement % Proficient in Reading in 49 Schools

Mathematics Achievement % Proficient in Mathematics in 49 Schools

Perceived Collective Efficacy School Means

Mean Teacher Experience in School

Teacher Qualification % Not Highly Qualified Teachers

School Minority Enrolment %White

School Socioeconomic Status % FARMS

.25**

.49***

-.67**

-.37***

-.34**

-.29***

.53**

.30**

-17

16

15

-.29*

-.22*

19

*p<.003
**p<.01
***p<.000

Figure 2
Relationship Between Collective Efficacy and Achievement in Reading and Mathematics Controlling for Socioeconomic and Minority Status

Reading Achievement %Proficient

Mathematics Achievement %Proficient

.34*

.71*

.73*

.26

Control for Minority Student Enrolment % White

Control for School Socioeconomic Status FaRMS

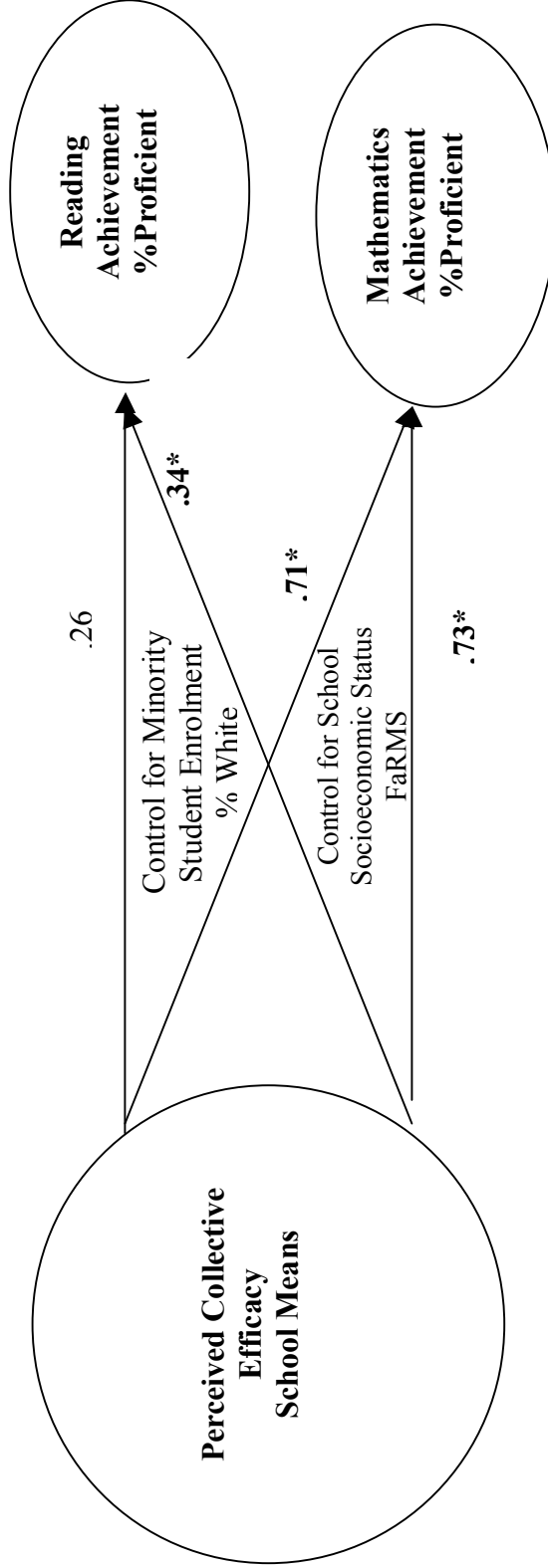Perceived Collective Efficacy School Means

*p<01

Appendix 1: **School Conditions for Professional Learning**
Harford County Public Schools, Maryland, USA

This questionnaire consists of three parts. Part 1 concerns your teaching experience,
Part 2, concerns your perceptions about your school as a learning organization.
Part 3 concerns your perceptions of collective efficacy in your school.

Part 1: Experience

1. Gender: Male   O

              Female   O

2. Number of years in teaching: _____

3. Number of years in current school: _____

4. What grade level do you teach for the majority of your time this year? _____

5. How many years have you taught this grade level? _____

6. Do you teach at least one course for which there is a High School Assessment?

                                    Yes   O

                                    No: O

7. Do you teach tenth grade English: Yes   O

                                    No: O

Part 2: School as Learning Organization: Survey for Teachers[1]

Directions: This questionnaire concerns your perceptions about your school as a learning
organization. There are no right or wrong responses. Please consider where you believe
your school is in its development of each of the five numbered descriptions shown in
bold-faced type. Each sub-item has a five-point scale. On each scale, darken the bubble
that best represents the degree to which you feel your school has developed.

**1. School administrators participate democratically with teachers sharing power,
authority, and decision making.**

1a   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1
            O O O O O O O O O O O O O O O O O

| Although there are some legal and fiscal decisions required of the principal, school administrators consistently involve the staff in discussing and making decisions about most school issues. | Administrators invite advice and counsel from the staff and then make decisions themselves. | Administrators never share information with the staff nor provide opportunities to be involved in decision making. |

[1] From: HORD, S. M. (1997). *Professional learning communities: Communities of continuous inquiry and improvement (Revised edition).* Southwest Educational Development Laboratory: Austin, TX.

1b   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1

O O O O O O O O O O O O O O O O O

Administrators involve the entire staff.	Administrators involve a small committee, council, or team of staff.	Administrators do not involve any staff

2. Shared visions for school improvement have an undeviating focus on student learning and are consistently referenced for the staff's work.

2a   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1

O O O O O O O O O O O O O O O O O

Visions for improvement are discussed by the entire staff such that consensus and a shared vision results.	Visions for improvement are not thoroughly explored; some staff agree and others do not.	Visions for improvement held by the staff are widely divergent.

2b   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1

O O O O O O O O O O O O O O O O O

Visions for improvement are always focused on students and teaching and learning.	Visions for improvement are sometimes focused on students and teaching and learning.	Visions for improvement do not target students and teaching and learning.

2c   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1

O O O O O O O O O O O O O O O O O

Visions for improvement target high quality learning experiences for all students.	Visions for improvement address quality learning experiences in terms of students' abilities.	Visions for improvement do not include concerns about the equality of learning experiences.

3. Staff's collective learning and application of the learnings (taking action) create high intellectual learning tasks and solutions to address student needs.

3a   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1

O O O O O O O O O O O O O O O O

The entire staff meets to discuss issues, share information, and learn with and from each other.	Subgroups of the staff meet to discuss issues, share information, and learn with and form each other.	Individuals discuss issues, share information, and learn with and from each other.

3b   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1

O O O O O O O O O O O O O O O O

The staff meets regularly and frequently on substantive student-centered educational issues.	The staff meets occasionally on substantive student-centered educational issues.	The staff never meets to consider substantive educational issues.

3c   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1
O O O O O O O O O O O O O O O O O

| The staff discusses the quality of their teaching and students' learning. | The staff does not often discuss their instructional practices nor its influence on student learning. | The staff basically discusses non-teaching and non-learning issues. |

3d   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1
O O O O O O O O O O O O O O O O O

| The staff, based on their learnings, makes and implements plans that address students' needs, more effective teaching and more successful student learning. | The staff occasionally acts on their learnings and makes and implements plans to improve teaching and learning. | The staff does not act on their learning. |

3e   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1
O O O O O O O O O O O O O O O O O

| The staff debriefs and assesses the impact of their actions and makes revisions. | The staff infrequently assesses the impact of their actions and makes revisions based on results. . | The staff does not assess their work. |

4. Peers review and give feedback based on observing each other's classroom behaviors in order to increase individual and organizational capacity.

4a   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1
O O O O O O O O O O O O O O O O O

| Staff regularly and frequently visit and observe each other's classroom teaching. | Staff occasionally visit and observe each other's teaching. | Staff never visit their peers' classrooms. |

4b   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1
O O O O O O O O O O O O O O O O O

| Staff provide feedback to each other about teaching and learning based on their classroom observations. | Staff discuss non-teaching issues after classroom observations. | Staff do not interact after classroom observations. |

5. Conditions and capacities support the school's arrangement as a professional learning organization.

5a   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1
O O O O O O O O O O O O O O O O O

| Time is arranged and committed for whole staff interactions. | Time is arranged but frequently the staff fails to meet. | Staff cannot arrange time for interacting. |

5b.   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1

O O O O   O O O O   O O O   O O O O

The site, structure, and arrangements of the school facilitate staff proximity and interaction.	While the facility and school membership are large, the staff are working to maximize existing arrangements for interaction.	The staff takes no action to manage the facility and personnel for interaction.

5c.   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1

O O O O   O O O O   O O O   O O O O

A variety of processes and procedures are used to encourage staff communication.	A single communication exists and is sometimes used to share information.	Communication devices are not given attention.

5d.   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1

O O O O   O O O O   O O O   O O O O

Trust and openness characterize all the staff.	Some of the staff are trusting and open.	Trust and openness do not exist among the staff.

5e.   5 -- -- -- 4 -- -- -- 3 -- -- -- 2 -- -- -- 1

O O O O   O O O O   O O O   O O O O

Caring, collaborative, and productive relationships exist among all the staff.	Caring and collaboration are inconsistently demonstrated among the staff.	Staff are isolated and work alone at their task.

Part 3: Collective Efficacy Beliefs[2]
For the following statements, indicate your level of agreement from
STRONGLY AGREE (1) to
STRONGLY DISAGREE (6)

SA   **SD**
1 **2** **3** **4** **5** **6**

1	2	3	4	5	6		
O	O	O	O	O	O	1.	Teachers in the school are able to get through to the most difficult students.
O	O	O	O	O	O	2.	Teachers in this school have what it takes to get the children to learn.
O	O	O	O	O	O	3.	Teachers here need more training to know how to deal with difficult students.
O	O	O	O	O	O	4.	Teachers in this school truly believe every child can learn

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[2] From: GODDARD, R.D. (2001). Collective efficacy: A neglected construct in the study of schools and student achievement. *Journal of Educational Psychology, 93*(3), 467-476.