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Professional Learning Communities, Leadership, and Student Learning

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Abstract

Professional learning communities have become one of the most talked about ideas in education today. Many K-12 schools are working to become professional learning communities in the hope that student learning will improve when adults commit themselves to talking collaboratively about teaching and learning and then take action that will improve student learning and achievement. The researchers in this study believe that a school must understand and practice the five disciplines of a learning organization to be a true professional learning community and that leadership plays a significant role in the ability of a school to become a professional learning community that enhances student learning. The questions explored in this study of six middle schools, three urban and three suburban, were: 1) What does a professional learning community look like in a middle school? 2) What kind of principal creates a professional learning community in his/her school? 3) What are the beliefs and dispositions of such a leader? 4) Do teachers perceive their school to be a professional learning community? and, 5) Is there a relationship between professional learning communities, leadership, and student learning?

Professional learning communities have become one of the most talked about ideas in education today. Many K-12 schools are working to become professional learning communities in the hope that student learning will improve when adults commit themselves to talking collaboratively about teaching and learning and then take action that will improve student learning and achievement. Dufour and Eaker (1998) state that “The most promising strategy for sustained, substantive school improvement is developing the ability of school personnel to function as professional learning communities” (p. xi). According to Walker (2002), “At the school level, this sense of community is evidenced in a commitment to the growth of the faculty as a whole and to activities such as seminar groups, reflective writing, team research, and discussion” (p. 22).

The idea of professional learning communities originated in the business sector with the belief that organizations can learn. According to Walker (2002):

The roots of the concept of community of leaders run as deep as the roots of community of learners. Mary Follett's (1924) work in the human relations movement in business led to democratic ways of relating in the workplace, and to Burns's (1978) transformational leadership. This human and participatory philosophy also influenced Total Quality notions and Senge's "learning organization" in *The Fifth Discipline* (Senge, 1990). Max Weber's systems theory (1947) contributed to our early understanding of the influence of the social and organizational context, and Getzels and Guba's (1957) adaptation of this theory described the relationship of systems theory to roles and personalities. (p. 23)

Cook and Yanow (1996) stated that "organizational learning refers to the capacity of an organization to do what it does, where what is learned is possessed not by individual members of the organization but by the aggregate itself. That is, when a group acquires the know-how associated with its ability to carry out its collective activities, that constitutes organizational learning" (p. 438). Senge (1990) reintroduced the term "learning organizations" in his seminal book *The Fifth Discipline*. Members of the education community became intrigued with the idea that schools should be about adult learning as well as student learning. In fact, many educators believed that student learning would improve when teachers were also engaged in learning activities. In response to the interest educators were showing in his work on learning organizations, Senge et al., (2000) wrote *Schools that Learn*. In this book, issues specifically germane to school organizations were addressed while continuing to promote the underlying premise of learning organizations found in *The Fifth Discipline*. As schools became engaged in building collaborative work cultures, the term learning organizations came to be referred to as professional learning communities in schools (Dufour & Eaker, 1998).

Dufour and Eaker state:

Each word of the phrase "professional learning community" has been chosen purposefully. A "professional" is someone with expertise in a specialized field, an individual who has not only pursued advanced training to enter the field, but who is also expected to remain current in its evolving knowledge base ... "Learning" suggests ongoing action and perpetual curiosity ... The school that operates as a professional *learning* community recognizes that its members must engage in ongoing study and constant practice that characterize an organization committed to continuous improvement In a professional learning *community*, educators create an environment that fosters mutual cooperation, emotional support, personal growth as they work together to achieve what they cannot accomplish alone. (pp. xi-xii)

In *Schools that Learn*, Senge et al., (2000) states, "The learning disciplines found in *The Fifth Discipline* offer teachers and administrators genuine help for dealing with the dilemmas and pressures of education today" (p. 7). In *The Fifth Discipline*, Senge (1990) states:

The tools and ideas presented in this book are for destroying the illusion that the world is created of separate, unrelated forces. When we give up this illusion we can build "learning organizations," organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together. (p. 3)

Senge (1990) states that there are five disciplines of a learning organization. While Senge advocates the importance of organizations addressing all five disciplines, he also believes that the first discipline, systems thinking, is the cornerstone of a learning organization because it integrates the disciplines. Systems thinking is defined as a body of knowledge and tools that help us see underlying patterns and how they can be changed. Senge states that it is these patterns that are barriers to change, not people or events. Educators have found, sometimes through trial and error, that making changes in one part of the system has a ripple effect on other parts of the system. Understanding patterns can allow a school or school district to be proactive rather than

reactive when one part of the system has a ripple effect on other parts of the system. Understanding patterns can allow a school or school district to be proactive rather than reactive when they are making substantive changes in programs and practices. All too often, teachers in schools have found it difficult to understand what is going on in their own little sphere of operations, much less to deal with issues and problems that affect the whole school (Owens, 1998). Reculturing schools requires the ability to understand not only what is happening in your classroom, but in your work group and in the larger organization of the school. Systems thinking must become part of a school's culture in order to support systemic reform instead of tinkering with parts and pieces of the school organization (Fullan, 1991; Bolman & Deal, 1991; Sarason, 1990).

The second discipline, personal mastery, reflects Senge's belief that "organizations learn only through individuals who learn" (p. 139). Personal mastery is defined as people who are committed to their own lifelong learning. Again, Senge states that "An organization's commitment to and capacity for learning can be no greater than that of its members" (p. 7). It is no longer sufficient for students to be the only learners in school. There are so many new strategies and methods that need to be a part of a school's culture to help all students learn. Adults in the school must be willing to try new ways of doing things to increase learning opportunities for all students.

For educators to be willing to try new strategies and programs, the third discipline, mental models, must be understood. Mental models are deeply ingrained assumptions and generalizations that influence how we understand the world and how we take action (Senge, 1990). According to Senge et al. (2000), "In any new experience, most people are drawn to take in and remember only the information that reinforces their existing mental models" (p. 67). Consequently, mental models are often barriers to people being able to adapt to change. In *Schools That Learn*, Senge et al., (2000) say:

This discipline of reflection and inquiry skills is focused around developing awareness of attitudes and perceptions—your own and those of others around you. Working with mental models can also more clearly and honestly define current reality. Since most mental models in education are often "undiscussable" and hidden from view, one of the critical acts for a learning school is to develop the capability to talk safely and productively about dangerous and discomfiting subjects. (p.7)

Being able to dialogue with oneself and others through the examination of mental models can provide the leverage necessary to transform a school culture. "Changes needed in middle schools today must revolve around the expansion of teachers' mental models of learning, skills in talking about their mental models, and skills in developing collective mental models" (Thompson, 2002, p. 11).

The fourth discipline, shared vision, has to do with people in a school being able to hold a shared picture of the future they seek to create (Senge, 1990). "The literature on school reform is replete with phrases like "moral purpose," "shared vision," "collective responsibility," "collaborative work cultures," and "democratic principles"..." (Doda and Thompson, 2002, p. 3). The literature suggests that a leader cannot dictate a vision, no matter how lofty or appropriate that vision may be. The vision must truly be shared.

The fifth discipline is team learning. According to Pounder (1998), "Interdisciplinary instructional teams appear almost exclusively in middle level schools and emerged in the late 1960s as a key component of the middle schools movement" (p. 71). Middle schools that are organized into interdisciplinary teams and small learning communities have the structure to support team learning but structure is not enough. Team learning must focus on group interaction through dialogue and skillful discussion (Senge, 2000). According to Erb (1997), "Teams where teachers engage in dialogue about matters of mutual concerns do reflect new levels of teacher interaction leading to the creation of novel solutions to educational problems" (p. 39). Senge (1990) emphasizes that "When teams are truly learning, not only are they producing extraordinary results, but the individual members are growing more rapidly than could have occurred otherwise" (p. 10).

With all of the challenges facing schools today and the emphasis on increased accountability for student learning, the idea of a school where people working together can create the results they truly desire, is especially

attractive. The idea that adults in schools must be learners for students to learn sounds simplistic but, in fact, this has often not been the norm in many schools. Creating a learning community for adults requires a new form of professional development. According to Sparks and Hirsh (1997), “This staff development not only must affect the knowledge, attitudes, and practices of individual teachers, administrators, and other school employees, but it also must alter the cultures and structures of the organizations in which those individuals work” (p. 2). Teachers have often considered professional development days a waste of time because a shotgun approach has been used to introduce teachers to new ideas that came from someone else without teacher input and often resulted in no follow through or support to implement the innovation and new strategy. Teachers were almost never given an opportunity to create their own meaning and understanding about the new strategy or practice, much less dialogue with their colleagues about the possible benefits of such a practice as it relates to student learning and their own beliefs about student learning.

The benefits of collaboration have been addressed through both quantitative and qualitative studies. Rosenholtz (1989) may have been the first researcher to attempt a large-scale statistical analysis of the relationship between teacher collaboration and student achievement. Quantitative data gathered from her statewide representative sample of 78 elementary schools in eight school districts show that collaboration is a strong predictor of student achievement gains in reading and math. The gains were measured with one cohort of students from second through fourth grades. A regression analysis controlled for school socioeconomic status, school size, teacher experience, teachers' verbal ability, and pupil-teacher ratio.

Little (1982) conducted case studies of four schools identified as successful on the basis of student achievement on standardized achievement scores and two schools identified as unsuccessful on the basis of the same criteria. She found that the successful schools were characterized by frequent teacher evaluation and feedback, teachers talking with one another about teaching, teachers working together to design their classes, and teachers teaching each other about teaching. All these collaborative practices were conspicuously absent in the unsuccessful schools (as cited in Smith & Scott, 1990, p. 16).

The Impact of Leadership on the Creation of Professional Learning Communities

In *Turning Points 2000*, Jackson and Davis (2000) state that “no single individual is more important to initiating and sustaining improvement in middle grades school students' performance than the school principal” (p. 157). Never before in the history of education has there been such a clarion call for leaders who can create a culture that fosters both adult and student learning and expands the definition of leadership to include all stakeholders in the school. Louis and Kruse (1995) have identified the supportive leadership of the principal as one of the necessary human resources for schools to become a professional learning community. Prestine (1993) suggests three factors necessary to create professional learning communities in schools. Principals must have the ability to share authority, facilitate the work of the staff, and have the ability to participate without dominating.

Professional learning communities are identified by professional collaboration to improve student learning. According to Leonard & Leonard (2001):

Professional collaboration is evidenced when teachers and administrators work together, share their knowledge, contribute ideas, and develop plans for the purpose of achieving educational and organizational goals. In effect, collaborative practice is exemplified when school staff members come together on a regular basis in their continuing attempts to be more effective teachers so that their students can become more successful learners. (p. 10)

Louis and Kruse (1995) maintain that a core characteristic of the professional learning community is an unwavering focus on student learning. Educational leaders certainly want and need to develop teacher leaders who will be committed to action and converted into agents of change if they are going to meet the challenges facing educators today. Senge (2000) talks about the impetus for change often coming first from the principal. He refers to principals becoming a “lead teacher and lead learner, and steward of the learning process as a whole” (p. 15).

If principals are to become the “lead teacher and lead learner” they must move beyond traditional leadership styles to create professional learning communities where the goal is to develop people, including oneself. Developing people, each with their own mental models and beliefs about schooling and learning, cannot be accomplished in an organization that does not value the lived experiences of all stakeholders. For people to learn together, they must be comfortable challenging their own and others assumptions and beliefs within safe places. According to Elmore and Wisenbaker (2000), “If dynamic change is to occur in middle schools, it is essential that we nurture teachers who are leaders of and inquirers into effective practice” (p. 281).

Lambert, Walker, Zimmerman, Cooper, Lambert, Gardner & Szabo (2002) call for a redefining of leadership that is more important than ever in this age of accountability where collective action must be taken to change the learning experiences for both teachers and students. “Constructivist leadership addresses the need for sense-making, for coherence, and for seeing educational communities as growth-producing entities. Leadership that is formed around the principles of constructivist learning for adults captures these possibilities for learning” (p. 35).

Constructivist leaders possess a set of beliefs, skills, and knowledge about leadership that emphasizes the reciprocal process among the adults in the school (Lambert, Walker, Zimmerman, Cooper, Lambert, Gardner, & Slack, 1995). Reciprocity is the cornerstone of a professional learning community. Purposes and goals grow from among the participants, based on values, beliefs, and both individual and shared experiences. While the role of principal is extremely important to the success of a school, the idea of one person being able to create a professional learning community is outdated in today's complex and politically charged society. As Fullan (1997) states, “Principals can make even more long-lasting contributions, by broadening the base of leadership of those with whom they work—teachers, parents, students” (p. 46).

In professional learning communities the principal encourages teachers to pursue personal development as part of their job. In one approach, the principal helps teachers integrate what they learn in professional development by meeting in small groups to discuss classroom application of those learnings. People read articles and books and form study groups that encourage reflection, inquiry, sharing and dialoguing. Individual and team judgment is valued more than rules, policies, forms, and procedures. Most importantly, everyone is encouraged to take responsibility for their own learning and development and this is considered to be a norm of the school's culture.

Research Design

Problem and Purpose Overview

The researchers who conducted this study believe that a school must understand and practice the five disciplines of a learning organization to be a true professional learning community and that leadership plays a significant role in the ability of a school to become a professional learning community that enhances student learning. This inquiry provided a description of what occurred in six middle schools, three urban and three suburban. (See Appendix A). The issue addressed was whether or not teachers and the principals in these six middle level schools believed their school was a learning organization, i.e., professional learning community, and whether or not student learning was occurring in their school.

Research Methods

A mixed methodology design was selected because some information needed to be collected from large groups of people and could be better collected and analyzed through a survey with quantitative results. (See Appendix B). Qualitative methods were used to collect information from the principals and teacher focus groups were conducted because of the importance of qualitative inquiry for the study of human group life. This study is grounded in the interactions of groups. Leaders who support the creation of a collaborative work culture through professional learning communities represent a more democratic type of leadership style, where everyone is a learner and a leader. Qualitative research methods are reflective of a more democratic philosophy (Bogdan & Biklen, 1992) and allow the researchers to study group dynamics and human interaction to have a better understanding of the school culture.

Research Questions

The questions explored in this study were (1) What does a professional learning community look like in a middle school? (2) What kind of principal creates a professional learning community in his/her school? (3) What are the beliefs and dispositions of such a leader? (4) Do teachers perceive their school to be a professional learning community? (5) Is there a relationship between professional learning communities, leadership, and student learning?

Methodology Rationale

The conceptual framework for this study was the concept of professional learning communities grounded in the five disciplines of a learning organization and how democratic/constructivist middle school principals create the conditions necessary for adult learning to improve student learning. This collective case study focused on determining the impact of the principal on creating a professional learning community and the influence of a professional learning community on student learning. Multiple sources of data were used to triangulate the data. Data sources in the study included interviews with the principals, focus groups composed of teachers, and the Learning Organization Practice Profile survey administered to teachers.

Participant Selection

The study examined the work of middle school principals and teachers in six different school districts, four schools in a large metropolitan Midwestern city and two schools in a midsize New England city. Schools were chosen for two reasons. The researchers wanted to study both urban and suburban middle schools. Three schools are in urban areas and three schools are in suburban areas. The schools will be identified as urban schools by the letter "U" before their school's number and the suburban schools by the letter "S" before their school's number. The second reason these schools were chosen for the study was because the researchers knew the principals in the schools and the principals had all made public statements that they were committed to and in the process of implementing the *Turning Points 2000* principles and that their schools had been guided initially by the recommendations found in *Turning Points (1989)*.

Principals U2, U3, and U6 work in urban settings. School U2 has 575 students and 45 teachers and has been identified by the state as a deficient school because of test scores but is making steady progress improving achievement scores. School U3 has 625 students and 55 teachers where the demographics have changed significantly in the last ten years. School U3 has 61% African-American students, 1% Hispanic, and 38% Caucasian. School U6 has 652 students and 46 teachers and is considered one of the top urban schools as far as the implementation of the recommendations of *Turning Points 2000* and rising achievement scores.

Principals S1, S4, and S5 work in suburban settings. School S1 has 725 students and 65 teachers. The school in which this district is located recently made the decision to build a 6th grade center and turn their middle schools into 7th and 8th grade buildings. School S4 has 661 7th and 8th students and 54 teachers. This school was awarded the Blue Ribbon School of Excellence Award in 2001-2002 and is recognized as an outstanding middle school that began implementing the original *Turning Points (1989)* recommendations in the early 1990s. School S5 has 910 students in a 7th, and 8th grade school with 69 teachers. This school is recognized as one of the best *Turning Points* schools in the state.

Data Collection

Data for this study were collected through interviews with the principals, the Learning Organization Practice Profile survey administered to all teachers, and focus groups with teachers. Interviews were used because of the type of information that the researchers wanted concerning the principal's beliefs and understandings of professional learning communities in the context of a learning organization. The Learning Organization Practice Profile survey given to the staffs related to principal behavior and learning organizations because the researchers wanted a broader range of opinions from all teachers in the school.

Principal Interview

Interviewing is a basic mode of inquiry and at the heart of the interviewing research is an interest in others' individual stories because they are of worth (Seidman, 1991). Interviews with the principals were critically

important in making sense of their beliefs and core values about leadership and learning. The interview questions were:

1. How do you define a learning organization/professional learning community?
2. Do you believe your school is a learning organization?
3. If no, what do you do as a principal to affect adult and student learning?
4. If yes, describe what makes your school a learning organization?
 - What do you do as a principal to facilitate making your school a learning organization?
 - Do you think what you do to facilitate your school being a learning organization positively affects student learning? Can you give some examples of what you do?
 - In general, in the time you have been principal at this school, have you seen an improvement in student learning?
 - Do you feel that you, as a principal, have had an impact on student learning?

Teacher Survey

The researchers chose 25 questions from a much larger survey entitled *Learning Organization Practices Profile* by Michael J. O'Brien (1994). The survey was a useful instrument for this study because the majority of the questions related to the five disciplines of a learning organization as identified by Senge. An example of a survey question in each of the five disciplines were:

Systems Thinking (Code 1): People have a broad understanding of our school's structure, processes, and systems and how they are interrelated.

Personal Mastery/Personal Learning (Code 2): The principal encourages us to pursue personal development as part of our jobs and to learn by doing.

Mental Models (Code 3): We are not afraid to share our opinions and speak our minds.

Shared Vision (Code 4): We have a vision of ourselves as a school in which staff learning and purposeful change are expected.

Team Learning/Principal Support (Code 5): We work hard to eliminate “we/them” mindsets; we cooperate and collaborate whenever possible.

There were three other categories that were addressed in the survey because they were also mentioned in the principal interviews and teacher focus groups. These areas were:

Relationships/Trust (Code 6): We routinely ask one another for feedback on our performance so that we continually improve our teaching.

Data Informed Decision Making (Code 7): All of our staff receives data relevant to their work, i.e., assessment data.

Risk Taking (Code 8): People are recognized for being courageous, that is, for risk taking.

Teacher Focus Groups

Teacher focus groups were used as a member check to ensure validity and rigor of the findings. Two focus groups in each school, representing a cross section of teachers, were chosen collaboratively by the researchers and the principal. Each focus group was comprised of six to seven participants.

Findings

Using principal interviews, the Learning Organization Practice Profile survey, and focus groups, the following findings reflect whether the principal and teachers regard themselves as a professional learning community.

Discipline #1: Systems Thinking

Systems thinking, the cornerstone of a learning organization, was only mentioned by principals U2, S5, and U6. Principal U2 mentioned systems thinking more than any of the other principals. She said, “As a learning organization, our professional development and learning as adults is based on what the students have to learn. It is all connected. Everything has to be congruent—curriculum, instruction and assessment. Teachers must teach to standards. They have to ask themselves, what does this look like for a student and what must the student do to show he understands the standard.”

Principal S5 stated that middle school S5 is a *Turning Points* school in structure. It is a flat organization with key parts all connected together; the School Improvement Leadership Team, interdisciplinary teams, study groups, and curriculum discipline-based teams. The principal also stated that there is full faculty participation in decision making. Principal U6 mentioned that the faculty had collectively flattened its organizational structure. Teacher surveys from schools U2, S5, and U6 also had the highest mean scores in the area of systems thinking, in direct relation to the number of times principals in their schools mentioned learning organizations.

Discipline #2: Personal Mastery

Personal mastery was mentioned by three of the principals in their interviews. Principal U2 said that everyone in the school is responsible for their own learning. She talked about the math teachers deciding that they needed job-embedded professional development to be better math teachers so, collaboratively, the principal and the math teachers developed a summer math class for the teachers with outside instructors. Teachers received college credit from a local university. Principal S4 said that everyone is participating in learning, from the students to the bus drivers to staff to teachers. Principal S5 said that when teachers want to learn some better ways of doing things they go out to other schools to visit. Although all of the principals did not specifically mention personal mastery, all of the teaching staffs indicated, through the Learning Organization Practice Profile survey, that they agreed or strongly agreed that their schools promoted personal mastery.

The Learning Organization Practices Profile survey questions that related to the role of principal in the area of personal mastery emphasized teachers being encouraged to pursue personal development as part of their jobs, to learn by doing, and to take responsibility for their own learning and development. Overall, teachers gave personal mastery the highest mean score on the Learning Organization Practices Profile survey. The focus groups at school S5 said that some teams observe each other, participate in the actual lessons of other teachers, and show students that the teachers are life-long learners. A teacher in school U2 said that she models learning for her students by sharing what she is learning. Another teacher in this school said that students are imitators and they imitate their teachers who are learners. A teacher in school U3 said that by showing students that success in life requires life-long learning, students are more likely to see them as examples and try to do the same in their own lives.

Discipline #3: Mental Models

Mental models, as defined by Senge (1990), were not mentioned by any of the principals, although teachers said that they were not afraid to share their beliefs and opinions at their school with other teachers and with the principal. In school U6, teachers in the focus group said that they don't always reach a building decision quickly, but once they do, it seems to work. A teacher in school U3 said, “We rely on each other through discussion and collaboration to improve teaching and increase learning for students.”

Discipline #4: Shared Vision

Shared vision was mentioned by all of the principals. Principal S1 said, “Our business is student learning.” Principal U2 said, “We believe that everyone, teachers, administrators, students, and parents, must be learn-

ers.” Principal U3 said, “We are now in the process of finalizing our vision statement that focuses on being a learning community. The entire staff has had multiple input opportunities on the vision statement and a writing team is now working on the statement.” Principal S4 stated, “Our vision statement reflects a caring environment for young adolescents and a staff that has input and ownership and are doing more than they are required to do.” Principal S5 indicated that the school is one where student teacher relationships are valued. Principal U6 said that she uses the school vision as a guide when the staff makes decisions. Teachers confirmed the principals' beliefs that their schools had a shared vision both on the Learning Organization Practices Profile survey and in the focus groups. The questions related to shared vision had the highest mean score of any of the disciplines.

Discipline #5: Team Learning

In addition to every principal talking about shared vision, team learning was also mentioned by all of the principals. It was mentioned five times by one principal, six times by one principal and 10 times by one principal. Principal U2, who talked about team learning ten times during her interview, made the following comments, “As a principal I go to team meetings and we talk about the objectives and standards the teachers are teaching. I meet with students and tell them what I expect from them as learners. The teachers and I brainstorm ways to help teach certain concepts differently. All of our professional development sessions involve people working together. We also know that our parents need to be a part of the equation. We constantly ask parents to assess what it is they need to do to help their students learn.”

Principal U6 mentioned team learning six times during her interview. She said, “Everyone in the building has an opportunity to provide input into our decisions that we feel are best for kids. We also have established a Critical Friends group and teachers are just sharing so much more with each other. I provide staff with ideas I have received from other principals. I also expect our faculty to share with others about what they are learning. Much of this is done through our team time, but I feel the teachers can learn so much from each other. We have an excellent staff and I feel I work well with them and together we shall continue to raise student achievement.”

Principal S4, who mentioned team learning five times, was asked how she had helped to make her school a learning organization. She said, “I find ways to support teachers and their work. I attend weekly team leader meetings and regular team meetings. The teachers are good problem solvers. They work collaboratively on their teams and genuinely care about the students. Parents are also involved in much committee work and understand the middle school concept.”

Comments by the other three principals who mentioned team learning three times each emphasized the collaborative work that was taking place on the interdisciplinary teams. Every one of these principals also mentioned that they participate in team meetings with the teachers to provide new knowledge and to discuss or brainstorm ways to improve student achievement.

The Learning Organization Practice Profile survey questions that were related to team learning addressed ways the principal supported learning on the team and encouraging people to contribute ideas for improvements through individual conversations and group meetings. One question specifically related to teams having autonomy and being self-managed so that they could identify and solve their problems. Another question talked about teams sharing new information that would be helpful to others and that information was disseminated throughout the school.

While collectively teachers in the six schools agreed or strongly agreed that team learning was a part of their school's culture, the teachers in the schools with principals U2, S4, and U6 had the highest ratings on the Learning Organization Practice Profile in the area of team learning. This rating reflected the same order as the principals' number of comments in the interviews related to team learning, i.e., principal U2's teachers rated team learning higher in their school than any of the other schools, principal U6's teachers had the second highest score in the area of team learning and principal S4's teachers had the third highest score in the area of team learning.

Several areas surfaced during principal interviews and teacher focus groups that are not identified as one of the five disciplines in Senge's work. Relationships, data informed decision making, and risk taking were all mentioned by at least two principals and several focus groups.

These components have been identified in the work of the following educators as necessary in school reculturing. (Barth, 1990; Fullan, 2001; Glickman, Gordon & Ross-Gordon., 2001; Hargreaves, Moore & Manning, 2001; Schmoker, 1996; Sergiovanni, 1994). The following components were mentioned by several, if not all, of the principals in their interviews

Data Informed Decision Making

Data informed decision making was mentioned by all principals. Principal U3 made the following comments, "I meet with the teachers twice a month and we discuss data. While I am observing in classrooms I look for active learning, cooperative learning, project-based learning, reading and writing activities and report the use statistically of each of these strategies to the teachers as a group once a month." Principal U6 stated that she is constantly collecting data to provide feedback to the staff and that the staff collectively makes decisions by looking at test data and student work." Principal 6 continued, "We have to be held accountable for student learning and achievement and data can help us make better classroom decisions. The staff knows that I am constantly collecting data to provide feedback to the staff and we make decisions by looking at test data and our students' work."

Teachers in all schools agreed or strongly agreed, in the focus groups, that they receive data that are relevant to their work and that people and groups are encouraged to analyze mistakes to learn how to teach something better the next time. Teachers in the focus groups in school U6 talked about examining their test, attendance, and discipline data together on a regular basis. Teachers in the focus groups in school U3 said that they knew students were learning from both formal and informal assessments. With the emphasis on accountability and high stakes testing, schools have had to use data to improve practice if they hope to improve student learning.

Relationships

Relationships are vitally important to the well-being of every person in the school community, i.e., students, teachers, administrators, parents, and community members. Relationships can either promote a learning organization or inhibit the development of a learning organization. Every principal mentioned the importance of relationships and trust in creating a learning organization. Principal U3 said that she works on building trust and works on relationship building. Principal S4 stated that she is very concerned that the district will return to a departmentalized structure because of budgetary constraints and that it will be difficult to continue to build strong relationships between staff members in order to enhance student learning. Teachers at S4 also talked about their concerns that interdisciplinary teaming would be eliminated and erode the strong relationships that were a part of their school's culture. Middle schools, through the teaming organizational structure, have always understood the power of relationships on the success of the teaming process. The discipline of team learning should be a part of every middle school that is successfully implementing interdisciplinary teaming. Middle schools with teams that do not have good relationships cannot be functioning at an optimum level and supporting learning within their team, much less at the school level.

Risk-Taking Behavior

Middle school educators have always been risk-takers because middle schools have required educators to step outside of their comfort zone to reculture a school from a teacher-driven organization to a student-driven organization. Principal U2, whose building is in a large bureaucratic system, stated that she often had to take risks to improve her school. Principal S4 said that it was sometimes better to seek forgiveness than permission if what you were doing was in the best interests of the students. Principal S4 continued by stating that the real risk takers were the teachers as they pilot new programs and implement new classroom strategies.

Student Learning and Learning Organizations

Principals interviewed for this study believe that the disciplines identified by Senge (1990) and the three additional components identified by the researchers all contribute to student learning in their school. These six principals stated that they believed that they had contributed to the reculturing of their middle school. “The culture of an organization can determine, to a large degree, what we will believe (and disbelieve) and how we will view the events in our lives” (Thompson, 2002, p. 226). Reculturing is defined as changes that occur as a result of educators reflecting upon, evaluating, and expanding their own mental models regarding the education of young people (Senge, 1990).

As Jackson and Davis (2000) strongly point out, intellectual development of young adolescents is the main purpose of middle grades education. “It is to enable every student to think creatively, to identify and solve meaningful problems, to communicate and work well with others, and to develop the base of factual knowledge and skills that are the essential foundation for these “higher order” capacities (Jackson and Davis, 2000, p. 11).

In the area of student learning, every principal said that they felt students were learning in their school and they know this by looking at various assessments, i.e., test scores, student work, and portfolios. Principal S1 said that the test score trends have been positive over the years he has been in the building. Principal U2 said she has seen an improvement in student achievement during the four years she has been at this school. She is focusing on individual growth. If she goes into a classroom and the work is too easy, she challenges the teacher to challenge the students to think. She listens to students and the students are able to talk about what they are learning. Principal U3 said that her prime contribution to student achievement is to establish a culture where there is a positive belief in children and their capabilities. She said, “High expectations are held for each student and I use myself as a model of a poor, learning disabled, Black girl as an example that all students can succeed if there are high expectations for them.”

Principal S4 said that students in the lower quartile are moving into the middle level of state testing. She did say that the higher achieving students need to be encouraged to read higher level books and “as a school, students here have historically always done well on national and state tests and it is our challenge to maintain and improve that level.” Principal S5 said that although this past year their scores on a whole did not improve much, their rolling averages for the school are good and they have made great gains in writing. Principal U6 said that she has seen an improvement in student achievement. Test scores are moving up, along with the daily attendance rate of students. The teachers in the focus groups in all six schools said that students were learning and student achievement was improving. School U6 teachers attributed the improvement of student achievement to the use of mixed ability grouping and less turnover among the teaching staff over the last several years.

According to Barth (2002),

The ability to learn prodigiously from birth to death sets human beings apart from other forms of life. The greatest purpose of school is to unlock, release, and foster this wonderful capacity. Schools exist to promote learning in all their inhabitants. Whether we are teachers, principals, professors, or parents our primary responsibility is to promote learning in others and in ourselves. (p. 9)

Conclusions

All of these schools consider themselves middle schools that are following the recommendations of *Turning Points 2000*. Consequently, it is not surprising that all these middle schools see themselves as a learning organization. Middle schools must be systemic in nature to create a school based on the seven recommendations in *Turning Points 2000* (Jackson & Davis, 2000). Jackson and Davis (2000) state,

Together, the seven recommendations form a *system*, an interacting and interdependent group of practices that form a unified whole. Each recommendation, or element, within this system influences the expression

and reinforces the impact of other elements. As is true of all systems, the *Turning Points 2000* design system cannot be separated into self-contained components, where each can be addressed independently of the others. Instead, the design system we describe, composed of the seven *Turning Points 2000* recommendations for improving middle grades schools, must be dealt with holistically, systemically, to ensure success. (p. 27)

All of the principals indicated that they believe their school is a learning organization. Every principal made statements that affirmed this belief, reiterating that the focus of the school is everyone learning. Specific activities on ways everyone was involved in learning were mentioned in the principal interviews and the principals understood the importance of having a learning organization for students to reach their full potential.

Teachers, in focus groups, also confirmed the belief that their school was a learning organization. They mentioned strong leadership that focused on professional development that is job-embedded and determined by the staff. They also said that being a learning organization is helping them to put their energy where it needs to be and that, although the staff doesn't always reach a decision quickly, once they do, it seems to work. It takes a leader who understands and encourages the five disciplines, along with data informed decisions, relationships, and risk taking, to create a learning organization. These six middle schools that are systemic in nature and value the learning of everyone in the organization are having a positive impact on student learning.

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Appendix A

School Profiles Summaries

Suburban Middle Schools

Middle School 1 (S1)

School S1 is a suburban middle school located within the metropolitan area of a midsize Midwestern city. The school consists of 7th and 8th graders, as the 6th graders were relocated from the middle school into a 6th grade center at the beginning of 2002. There are two middle schools in the district. There are 725 students at S1. 83.0% of the students are Caucasian, 8.2% are African-American, 4.28% are Hispanic, 4.14% are Asian/Pacific Islander and .28% Other. There are 65 certified staff members and the student attendance rate is 94%. S1 has been an Accelerated School for four years. The principal, when the study was implemented, had been at S1 for four years.

Middle School 4 (S4)

School S4 is a suburban middle school located within the metropolitan area of a midsize Midwestern city. When the 7th, 8th, and 9th grade junior high schools in the district reorganized into middle schools more than 15 years ago, the decision was made to have 6th graders remain in their elementary schools and the middle schools be comprised of 7th and 8th graders. There are six middle schools in the district. S4 has 661 students and houses the ESL services for the district. There are currently 48 students in the ESL program, which represents approximately 8% of the student population. The student population is 87% Caucasian, 3% African-American, 7% Hispanic, and 3% Asian/Pacific Islander. There are 54 certified staff members and the student attendance rate is more than 95%. The principal, when the study was implemented, had been at S4 for 11 years.

Middle School 5 (S5)

School S5 is a suburban middle school located within the metropolitan area of a midsize Eastern city. With 910 students in 7th and 8th grade, S5 is the largest school in the study. There are 69 certified staff members. The student population is 97% Caucasian and 3% Other. The principal has been at the school as principal for three years. Previously, the principal was the assistant principal.

Urban Middle Schools

Middle School 2 (U2)

School U2 is a middle school located in the urban core of a midsize metropolitan area located in a midsize Midwestern city. There are currently seven 6th, 7th, and 8th grade middle schools in the district but one middle school is now a K-8 school. There are 575 6th, 7th, and 8th grade students and 45 certified staff members at U2. The school is 99% African-American and 1% Other. The principal has been at the school as principal for four years.

Middle School 3 (U3)

School U3 is the only middle level school in an urban profile district located in a suburban area of the metropolitan area of a midsize Midwestern city. The school's demographics have changed drastically over the last 10 years from being a predominately White middle-class school to a much more diverse school. The school consists of all of the 6th, 7th, and 8th graders in the district. There are 625 students. 61% of the students are African-American, 38% are Caucasian, and 1% are Hispanic. The attendance rate for students is 97%. There are 55 certified staff members. The principal has been the principal at U3 for four years.

Middle School 6 (U6)

School U6 is a 6th, 7th, and 8th grade middle school in an urban district located in a midsize Eastern city. There are 652 students. 43% of the students are Caucasian, 29% are Hispanic, and 27% are African-American. 46 certified staff members. The principal of three years was the former assistant principal.

Appendix B

Learning Organization Practice Profile Survey Results						
Mean Scores						
	S1	U2	U3	S4	S5	U6
Discipline #1: Systems Thinking	3.18	3.33	2.43	3.15	3.18	3.20
Discipline #2: Personal Mastery	3.60	3.70	2.97	3.60	3.20	3.30
Discipline #3: Shared Vision	3.50	3.70	2.97	3.56	3.20	3.30
Discipline #4: Shared Vision	3.50	3.80	3.40	3.80	3.70	3.70
Discipline #5: Team Learning	3.25	3.50	2.73	3.41	3.35	3.45
<i>Note:</i> Response metric for the Learning Organization Practice Profile Survey ranges from 1 to 4 with (1) Strongly disagree, (2) Disagree, (3) Agree, (4) Strongly Agree.						