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TRANSFORMING SCHOOLS INTO LEARNING ORGANIZATIONS: SUPPORTS AND BARRIERS TO EDUCATIONAL REFORM

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The outdated manner in which we operate schools is tied to a reality that no longer exists. The society for which we prepare our students has shifted from a factory to a learning organization model. If we hope to prepare our graduates for successful participation in learning organizations we must transform both the structure and culture of our schools. This article summarizes data from 50 New Brunswick schools that are attempting to implement a professional learning community approach. In it we analyze both the strengths and barriers that impact this effort. The findings focus on the culture, leadership, teaching, and the professional growth in these schools. While identifying essential changes they contain promise that the task is achievable.

Introduction

What is the underlying purpose of school and through what approach can it be best achieved? As we enter the second decade of the 21st century the answers to these two questions appear to be at odds. The purpose, it can be argued, is to prepare our youth for a rapidly changing, ever more complex, and interdependent world. Unfortunately we attempt to do so by clinging to an organizational approach that was designed for a more stable, simpler, and independent one. The technological workplace facing our students redefines itself at an ever

increasing pace, shifting from a physical to a virtual reality while the approach we use to educate them prepares them for work in a factory that has long since been abandoned. The organizations of the future will be networks driven by individual and collaborative learning—learning organizations* that continually re-invent themselves. Therefore the best way to align our purpose with our approach is to transform schools into learning organizations as well.

The term learning organization, when used to describe schools, is commonly referred to as a professional learning community (PLC). The construction of the PLC instrument used in our case study was based on a definition we derived from our review of the literature. For us a professional learning community begins with the attributes outlined by Shirley Hord (1997):

a) supportive and shared leadership, b) collective creativity c) shared values and vision, d) supportive conditions, and e) shared personal practice. We further incorporated: f) continuous inquiry focused on the improvement of student learning from Astuto, Clark, Read, McGreer, and Fernandez (1993), g) teachers who share norms and values and engage in reflective dialogue that deprivatizes practice from Louis and Kruse (1995), h) professional collaboration and joint responsibility for student learning from Lambert (1998), and i) the identification of essential curriculum, j) use of common formative assessments, and k) systemic interventions from DuFour, DuFour, Eaker, and Many (2006). Using these attributes we identified twenty statements that could measure the readiness of a school to implement a professional learning community approach for school operations (see Appendix A).

The conventional approach that still dominates the operations of many schools is a remnant of a bureaucracy designed to meet the training needs of an industrial society. The focus of this approach is on standardization rather than creativity. In this standards-driven system,

* The term *learning organization* originated as a business construct from the work of Senge (1990/2007). This organizational model when adapted to education has morphed into a learning community or professional learning community.

improvement efforts are held ransom by an inappropriate use of an outcomes-based approach that forces teachers to cover an impossible volume of curriculum and then evaluates their success using a testing format that undermines creative instructional practices. Fullan (2010) argues that “it is not whether to have standards and assessments that is the question, but rather the crucial variable is *how they are used*” (p. 70). Darling-Hammond (2010) further argues that the use of standards and tests to punish those who fail to meet them runs counter to our current knowledge of effective change and that “improvements depend on greater teacher, school, and system learning about more effective practice” (p. 73). Although we know the conventional approach is incapable of dealing with the demands for flexibility and creativity requisite for learning organizations (Beairsto, 1999; Hargreaves, 2003b) we persist in its use. If schools are to become learning organizations our mental models for improvement must shift from improving teaching to enhancing learning (DuFour, 2002). As we reframe school operations as professional learning communities we must also revisit the concept of a community of continuous inquiry and improvement (Astuto, et.al., 1993). Rather than punishing schools for failing to meet standards we must promote schools where learning is an interdependent focus for both students and teachers (DuFour, Eaker, & DuFour, 2005).

One way to promote teacher learning is to change the way we evaluate teachers. Traditional efforts to improve teaching have focused on a “divide and fix” clinical supervision model. The dependence upon clinical supervision, in which an administrator supervises and documents one teacher at a time, is predicated on the belief that administrators are the people that know best how to improve instruction. Schmoker (2005) argues that this mentality is out of date and that the collective knowledge and skills of colleagues can contribute far more to the improvement of teaching. An interdependent focus means that learning is not a simple one way

process. Students learn not only from teachers but from other students, and teachers learn not only from each other but from students as well. The supervision model needed to promote interdependent learning must be learning-based rather than teaching-based. The supervision model we adopt must shift from a focus on inputs (teaching) to outputs (learning) and from individuals to the common. To improve our schools we need to focus on all students and all teachers and determine how to improve everyone's learning. This focus on "learning for all" necessitates an approach founded on professional collaboration (Datnow, 2002; Goertz, 2001; Hargreaves & Goodson, 2006; Slater, 2004). It is an approach that requires us to perceive of schools not as bureaucratic institutions but as learning communities (Scribner, Cockrell, Cockrell, & Valentine, 1999; Senge, Kleiner, Roberts, Ross, & Smith, 2000). At the most fundamental level this approach is a reform that aligns the purpose of schooling with the approach being used to achieve it.

In 2002, the New Brunswick Department of Education initiated a process of transforming schools from teaching-focused bureaucracies to learning-focused communities (Williams, 2006). A year later, Hargreaves (2003a) introduced the province's educational leaders to the concept of the professional learning community (PLC). This was followed by a mutually spearheaded effort by the school districts and the Department of Education to provide senior leadership with an understanding of PLCs (DuFour, 2004). During the ensuing five years several hundred educational leaders from schools, district offices and the Department of Education attended sessions that provided both the theoretical background and an understanding of the practical support required to adopt a PLC model for schooling. Districts and the department jointly offered an eight day PLC Academy attended by teams of educators tasked with moving the reform forward in their workplaces. Subsequent efforts made by schools were then celebrated in

November 2007 at a province-wide leadership session which hosted school-based PLC initiatives that had proven successful. In August 2008 the province hosted an educational summit for another thousand educators. The summit was then followed by skill-specific training sessions on assessment in September, 2009 and response to intervention institutes in 2010. During the period between 2006 and 2009, we were developing and validating our school PLC instrument. By 2010 we had gathered PLC readiness data on nearly 20 percent of schools in New Brunswick.

This article outlines some preliminary data gathered as a part of a study designed to determine the forces that impact the successful adoption of the PLC approach in schools. The genesis of our study occurred when Morehouse and Tranquilla (2005) unveiled the findings of the province's school review process. Their report was the first to share province-wide concerns identified by the comprehensive assessment of school performance. Their presentation at the yearly leadership meeting showed serious concerns with the sharing of school leadership and the overall teaching and learning processes in schools, both of which could be improved through greater professional collaboration. This report coupled with a study of principal leadership styles (Williams, 1997) led to an investigation as to why principals who favoured a collaborative leadership style were not fostering collaboration within their schools. Subsequent conversations with the assistant deputy minister and other colleagues regarding the impact of educational policies and practices on school reform efforts (Brien, 2010) prompted a province-wide examination of the Anglophone educational system. *Institutional Barriers to Tri-level Educational Reform*, a study jointly funded by Social Sciences and Humanities Research Council and the Province of New Brunswick set out to develop instruments that could measure barriers at the school, district and provincial levels that prevented the adoption of the PLC approach in New Brunswick schools. The instrument designed to study school level barriers was completed and

was piloted in four test schools in 2007. In the months that followed we presented our instrument to five districts and invited principals to use it to monitor their school progress.

Outline of the Study

The report that follows is a case study of 50 schools located across 5 districts. These schools chose to use the school level instrument that we developed as part of our research study (Williams, Brien, Sprague, & Sullivan, 2008). Four of the schools in the study were those that assisted in the development of the school instrument. The remaining 46 schools chose to use our instrument to measure their progress as they sought to become professional learning communities. In the spirit of the action research approach used to develop the instrument, we partnered with the 50 schools and assisted them in analyzing the strengths and barriers identified by our instrument. The purpose of our partnership was to provide each school with a comprehensive report they could use to analyze the implementation process and inform the subsequent development of school improvement goals. As shown in Tables 1 and 2, the data, while not representative of a random sample, were gathered from a variety of schools. Although we presented our instrument to five districts, only two of the districts (V & Z) actively used our instrument to determine schools' readiness to become PLCs.

Table 1
District Sample Size

District	# of Schools
V	16
W	3
X	2
Y	6
Z	23

Table 2
School Grade Range

Grade Range	# of Schools	# of Districts
K-5	26	4
6-8	6	3
9-12	9	5
7-12	1	1
K-12	1	1
4-12	1	1
K-8	3	2
6-12	3	1

The school instrument was designed to examine four key measures of a school’s readiness to adopt a PLC approach: culture, leadership, teaching, and professional growth and development. The 20 statements used to represent these measures are listed in Appendix A. Each of the statements were sampled by three to four items (see Appendix B). School data were gathered by asking teachers to respond to a total of 62 items. Each item used an expanded Likert scale (Hord, 1996) to better inform the respondents’ choices. The descriptors for each item range from a more bureaucratic approach (a score of 1 or 2) to a more learning organization approach (a score of 4 or 5). Analysis of the data was conducted by assigning the term *barrier* to any item for which 30% or more teachers in a school scored it with a 1 or 2. The term *strength* was assigned if a majority (60% or more) of teachers in a school scored it with a 4 or 5. The choices for these threshold percentages were based upon 43 years of experience that the two researchers had as public educators and administrators. Our belief was that it would take only a few on a staff (30%) operating on a bureaucratic approach to be a barrier but it would take far more (60%) before an item could be deemed a strength.

It is important to note that at the outset our study was designed to find the barriers that schools faced as they set out to implement the PLC approach. In the process of our investigations we were able to identify strengths as well. Remaining true to our intent of conducting action research, when we shared the feedback with the schools we provided both the barriers and strengths and suggested that they use the strengths we had identified to overcome their barriers. Given that this was an enlightening process for the schools that participated we are including both sets of data in the findings that follow. The large number and coherence of items of strengths that were reported allowed us to provide a general overview of *all* the strengths. We did so by aggregating specific items into the statements that they measured (see appendices A and B). Since in most instances the items that were reported as barriers were not as coherent, they could not be aggregated as barriers statements. We therefore decided to be more specific and provide these data by item. In order for an item to qualify as a barrier across the sample, two criteria had to be met: at least 30% of the individuals in a school must score the item as a barrier, and at least 30% of the schools in the sample must recognize the item as a barrier.

Before moving to the findings it is important to note that the guiding principle of our research was to provide schools with data and encourage them to use it to collaborate and to set goals for the yearly school improvement plans required by the district office. In the true spirit underlying PLC collaboration the findings were not to be used to externally assess school performance, only to provide the respondents with information on their current reality. Therefore, all data collected and reports generated were kept in confidence and were shared with no one outside the school.

Findings from the Study

Results from the entire sample, while dominated by those from Districts V and Z, provide important insights into the provincial pattern. The analysis in this paper focuses on each of the four key measures—culture, leadership, teaching, and professional growth and development—by examining strengths and barriers separately.

School Culture

As shown in Appendix A, there were five statements related to school culture that were measured by the school instrument. Tables 3 and 4 summarize the strengths and barriers identified by study respondents.

Strengths. The patterns that emerge from the data on school culture are shown in Table 3. Eighty percent of schools in the sample reported that a majority of teachers believed their school had a culture of collegiality, trust and commitment. Most teachers were receptive to the presence of other professionals in their classrooms, trusted colleagues enough to share instructional practices, and were committed to helping other teachers improve instructional practices. Eighty percent of the schools also reported that a majority of teachers believed that school culture supported professional collaboration.

Table 3
Culture Strengths

Statement	Percent of Schools (N=50)
This school has a culture of collegiality, trust, and commitment.	80
The culture in this school supports professional collaboration.	80
Teachers in this school have the time to collaborate with their colleagues regarding student learning.	30
The impact that structural factors have on professional collaboration are addressed in this school.	22
In this school we recognize the importance of effective communication.	30

Teachers indicated that they collaborated to identify and address school-wide concerns, dialogued with colleagues about student learning, and felt they were treated as professionals. In contrast to these two patterns, only 30% of schools had a majority of teachers who indicated they had the time to collaborate with their colleagues regarding student learning. In schools where this was reported as a strength, teachers indicated that they were assigned meeting times during the regular school day to discuss student learning, or took the time after school hours, between classes, or during preparation periods to do so. The majority of teachers in 22% of the schools indicated that structural factors promoted professional collaboration. These teachers reported that factors such as common teaching assignments, the physical layout of the building, and the daily schedule, supported professional collaboration. Finally, in 30% of the schools the majority of teachers indicated that effective communication was an important part of school culture. These teachers reported frequent discussions dealing with student learning at staff meetings, the existence of an effective communication system in the school, and systems in place that addressed personality issues and rigid opinions.

Barriers. Fifteen items were used to identify patterns within the data describing school culture. Three of these items scored highly enough to represent a barrier. When asked if teachers in their school have time to collaborate with their colleagues regarding student learning, 64% of the schools indicated that few teachers are assigned meeting times during the regular school day to discuss student learning.

Table 4
Culture Barriers

Item Number	Item Descriptor	Percent of Schools (N=50)
3a	Few teachers are assigned meeting times during the regular school day to discuss student learning.	64
4a	Teachers find it hard to collaborate because there are few common teaching assignments.	31
4c	The daily schedule in the school makes it impractical for teachers to collaborate.	35

In about a third of the schools, decisions regarding teaching assignments (31%) and the daily schedule (35%) prevented adequate collaboration thereby making it difficult for teachers to collaborate. Assuming that small schools would have only one teacher for some courses/grades, the lower percentages for the last two barriers may reflect the ratio of small to large schools.

School Leadership

As shown in Appendix A, there were five statements in the school instrument that measured school leadership. A summary of the strengths and barriers in this area is presented in Tables 5 and 6 respectively.

Strengths. The majority of teachers in 46% of the schools indicated their school leadership was grounded in effective organizational practices. Many schools reported that they

had a vision that directed decision-making. About a third reported that classroom operations and teachers' work was clearly coordinated and teacher energy was expended in the proactive pursuit of their own goals.

In 20% of the schools a majority of teachers reported that efforts to build leadership capacity reinforced learning among teachers and students. These efforts were reflected mainly in the degree to which leadership responsibility was shared by every individual. Leadership capacity was impacted to a lesser degree by level of teacher expertise in collaborative skills and teachers' ability to impact the selection of a new principal. The most notable leadership finding pertained to the influence of shared leadership upon increasing school-wide leadership capacity. In 64% of the schools a majority of teachers indicated that principals frequently collaborated with staff on matters pertaining to both pedagogical and policy matters. Teachers in these schools also indicated a consistent choice to participate in shared decision-making. In 40% of the schools the majority of teachers indicated that school decisions were based on careful analysis of student performance data. This was reflected by teachers' capability to gather and analyze data, the frequency with which this occurs, the timely availability of external data, and the level of importance placed on internal data when making instructional decisions. While 30% of schools regarded the manner by which resources were allocated as a strength, analysis of individual items for the resource allocation statement varied.

Table 5
Leadership Strengths

Statement	Percent of Schools (N=50)
School leadership in this school is grounded in effective organizational practices.	46
Building of leadership capacity among both teachers and support staff reinforces learning for both teachers and students in this school.	20
The sharing of leadership strengthens the leadership capacity of this school.	64
Decisions in this school are based on careful analysis of school-based data on student performance.	40
Decisions regarding resource allocation are made by those most involved in their use.	30

Although 30% of schools regarded the manner by which resources were allocated as a strength, analysis of individual items for the resource allocation statement varied. While in over 40% of schools the majority of teachers indicated that the purchase of resource materials was a collaborative process, only 30% of the schools had a majority of teachers who were actively encouraged to be part of the teacher timetabling process. This figure dropped to 12% when it came to collaboration on non-teaching staff assignments.

Barriers. Sixteen items were used to identify patterns within the data describing leadership. Four of these items scored highly enough to represent a barrier (see Table 6 below). When asked if teachers in their school are consulted when a new principal is hired, the majority of teachers in 84% of schools indicated they were not. Forty percent of the teachers expressed concern that the delay in receiving external data made it ineffective for improving instruction. Forty-seven percent of the schools stated that administrative decisions on creating the teaching schedule was a concern. Fifty-five percent indicated that the assignment of non-teaching staff was a concern.

Table 6
Leadership Barriers

Item Number	Percent of Schools (N=50)	Item Descriptor
2c	84	Professionals at this school are not consulted when a new principal is hired.
4b	40	External data on student performance are seldom available in time to improve instructions or accommodate student needs.
5b	47	Teachers have little or no input into the creation of the teaching schedule.
5c	55	Assignments for non-teaching staff (clerical, para-professionals) are made by the principal.

Teaching

Appendix A lists the five statements related to teaching that were measured by the school instruments. Tables 7 and 8 summarize the strengths and barriers respectively as identified by the study participants.

Strengths. The greatest strength with respect to teaching dealt with instructional strategies and assessment practices. In 80% of the schools the majority of teachers perceived this to be a strength. Teachers frequently indicated that their teaching approaches were modeled on best practices, personal reflection, and collaboration with colleagues. This was reinforced by indications that most teachers did collaborate to improve their teaching and credited this collaboration with increased teaching expertise.

The second statement focused on teacher efforts to meet the needs of students of all ability levels. Since New Brunswick is a province that places a high expectation on inclusionary instructional practices this result is particularly important. Only 24% of schools had a majority of teachers who believed that instructional practices met the needs of students of all ability levels. The first item addressing this statement probes to see if teachers differentiate instruction for both

low and high ability students. Nearly two-thirds of the schools indicated that a majority of teachers did so. The remaining two items probed to see how effectively paraprofessional assistants were used to help meet the needs of students of varying ability levels. There were very few schools (< 8%) where a majority of teachers indicated that they received ongoing in-service that promoted collaboration with paraprofessionals. Even fewer (<4%) schools indicated that paraprofessionals had been provided with formal training in instructional support. Only 36% of schools reflected a majority of teachers who deemed effective lesson planning vital for improving student achievement. In very few schools (4%) were the majority of teachers assigned time to discuss best planning practices or collaborate on lesson planning. In about half of the schools the majority of teachers indicated that lesson planning was based on sound instructional practices shared among colleagues and that teachers' lesson planning focused on team decisions regarding the essential material from the provincial curriculum.

Table 7
Teaching Strengths

Statement	Percent of Schools (N=50)
Teachers in this school are encouraged to use professional collaboration to learn effective instructional and assessment practices.	80
Instructional practices in this school meet the needs of students of all ability levels.	24
Effective lesson planning is vital for improving student achievement in our school.	36
In this school, interventions are provided to students who require additional support.	54
In this school, assessment is a key component of instructional practices and contributes to student learning.	58

The pattern regarding teachers' use of interventions for students who required additional support was more positive. In 54% of schools, a majority of teachers reported the existence of

formal school-wide steps that supported students of all ability levels who experienced academic difficulty. A similar percentage indicated the existence of a proactive school-wide approach to reinforce appropriate student behaviour. Many schools reported that a formal orientation program was in place to provide new student cohorts (K, 6, or 9) with support during the transition to a new school.

The final statement focused on the contribution that assessment makes to student learning. Of the four items used to assess this statement three were perceived as strengths by a majority of teachers in about 75% of schools. Teachers perceived the most important purpose of assessment is the timely intervention of instructional practices. Likewise, it was perceived important that assessment was based on sound principles of learning and designed to ensure fair evaluation of diverse groups of students. Third, most teachers used a variety of ongoing approaches to assess student learning. The fourth item reduced the overall percentage of this statement to 58%. This item asked whether assessment was perceived as a collaborative task of a team of teachers. In only 6% of the schools did a majority of teachers deem this so.

Barriers. Sixteen items were used to identify patterns within the data describing teaching. As shown in Table 8, four of these items scored highly enough to represent a barrier. When asked if in-service is provided to teachers who work with paraprofessionals, 93% of the schools indicated that this was a barrier. In the same regard 44% of the schools indicated that the lack of training in instructional support provided to paraprofessionals was a barrier. Another instructional barrier that was reported in 51% of the schools was the lack of time provided to collaborate on lesson planning. The final barrier, which was reported in 49% of the schools, focused on assessment. Although common assessment is a fundamental part of PLCs

(Ainsworth, 2007), teachers in nearly half the schools indicated that assessment continues to be a practice that is undertaken by individuals rather than by collaborative teams.

Table 8
Teaching Barriers

Item Number	Percent of Schools (N=50)	Item Descriptor
2b	93	Little or no in-service is provided to teachers who work with paraprofessionals here.
2c	44	Training in “instructional support” is not provided to paraprofessionals at this school.
3a	51	Teachers here seldom have time to discuss best planning practices or collaborate on lesson planning.
5c	49	Assessment is an individual teacher task.

Professional Growth and Development

Appendix A lists the five statements that were used to measure PLC readiness in the area of professional growth and development. This section was unusual because there were no barriers that could be identified across the 50 schools.

Strengths. Since learning communities are characterized by a widespread pattern of continual learning this measure of readiness to become a PLC is particularly germane. The patterns that emerge from the data on professional growth and development are shown in Table 9. In 58% of the schools a majority of teachers considered professional growth a multi-faceted, systemic and on-going component of improvement efforts. About 60% believe this was achieved through professional reading, academic coursework, and teacher collaboration. More than 80% felt that professional growth extended beyond professional development sessions that were provided to them. Notwithstanding these beliefs, in only 26% of the schools did the majority of

teachers report that more than half of the teaching staff was engaged in some form of professional development. Support for teachers' professional growth was more widespread. Eighty percent of schools indicated that a majority of teachers believed that their administrators advocated for resources to support teacher requests for professional development. In these schools professional development was a term applied not only to teachers but to all staff members. Equally important, professional growth is an integral part of the teacher supervision process.

The third statement was the highest scored strength in the survey. In 84% of the schools the majority of teachers believed they had the knowledge, skills, and dispositions to engage in professional collaboration. In nearly every (98%) school there was a strong belief that collaboration involved working with colleagues on tasks that improved student learning. Most teachers believed they had the skills to do this and many teachers reported that they sought opportunities to enhance their professionalism by working with colleagues.

Table 9
Professional Growth (Strengths)

Statement Number	Percent of Schools (N=50)
In this school professional growth is a multi-faceted, systemic, and on-going component of school improvement efforts.	58
Professional growth is supported in this school.	80
Our teachers have the knowledge, skills and dispositions to engage in professional collaboration.	84
Professional development for teachers is organized using a comprehensive plan focused on the school's vision.	40
In this school, mentorship provides for professional growth.	38

The fourth statement examined the coherence between professional development efforts and the school vision. While a majority of teachers in 40% of schools believed this was a strength, the items within this statement differed. Sixty percent indicated that the ability to focus teacher professional development on the school improvement plan was a strength. Only 18% believed that district PD reinforced school improvement plans. In fewer than half of schools were a majority of teachers seeking professional development that focused on the school vision. The final statement partly reflects the impact of the beginning teacher induction program on teacher professional growth.

Mentorship was a key aspect of professional growth in only 38% of schools. While 60% of schools reported a high degree of teachers helping new teachers, only 40% perceived the beginning teacher induction program to be consistently successful and based upon a formal school-wide policy. The third item dealt with mentorship of experienced teachers. In slightly more than 10% of schools a majority of teachers indicated that teachers were encouraged to grow through experiencing administrative responsibilities.

Barriers. In this study there were no items for Professional Growth and Development that represented a barrier. This does not mean that there were no schools that reported a barrier for this measure. It is a reflection of the criteria we used to define a barrier across the 50 schools studied. In order for an item to qualify as a barrier across the sample, two criteria had to be met: at least 30% of the individuals in a school had to score the item as a barrier, and at least 30% of the schools in the sample had to recognize the item as a barrier.

Summary of the Data

Of the 20 statements that were used to measure schools' readiness to implement a professional learning community approach, five were found to be strengths in more than 80% of the schools sampled. The first tier of most frequently reported strength included the following:

1. Teachers have the knowledge, skills, and dispositions to engage in professional collaboration (84%).
2. There exists a culture of collegiality, trust and commitment (80%).
3. School culture supports collaboration (80%).
4. There is encouragement to use professional collaboration to learn effective instructional and assessment practices (80%).
5. There is support for professional growth (80%).

The second tier consisted of less common strengths, being reported in 54% – 64% of the schools sampled.

6. There is sharing of leadership that strengthens the school's leadership capacity (64%).
7. The belief exists that professional growth is multi-faceted, systemic, and on-going component of school improvement efforts (58%).
8. Assessment is a key component of instructional practices and contributes to student learning (58%).
9. Interventions are provided to students who require additional support (54%).

The third tier consisted of strengths that were reported in 36% - 46% of the schools sampled.

10. School leadership is grounded in effective organizational practices (46%).
11. School decisions are based on careful analysis of school-based data on student performance (40%).
12. Teachers' professional development is organized using a comprehensive plan focused on the school vision (40%).
13. Mentorship is provided for professional growth (38%).
14. Effective lesson planning is vital for improving student achievement (36%).

The fourth tier consisted of strengths that were reported in 20% - 30% of the schools sampled.

15. There is recognition of the importance of effective communication within the school (30%).
16. Decisions regarding resource allocation are made by those most involved in their use (30%).
17. Teachers have time to collaborate with colleagues regarding student learning (30%).
18. Instructional practices meet the needs of all ability levels (24%).
19. The impact of structural factors on professional collaboration are addressed (22%).
20. Building leadership capacity among both teachers and support staff reinforces learning for both teachers and students (20%).

Of the 11 items that were found to be barriers to the implementation of the PLC approach five were reported by more than half of the schools in the study. These barriers were the following:

- 1) Little or no in-service is provided to teachers who work with paraprofessionals here (93%).

- 2) Professionals at this school are not consulted when a new principal is hired (84%).
- 3) Few teachers are assigned meeting times during the regular school day to discuss student learning (64%).
- 4) Assignments for non-teaching staff are made by the principal (55%).
- 5) Teachers here seldom have time to discuss best planning practices or collaborate on lesson planning (51%).

An additional 6 of the 11 items were reported by between 31% to 49% of the schools sampled.

- 6) Assessment is an individual teacher task (49%).
- 7) Teachers have little or no input into the creation of the teaching schedule (47%).
- 8) Training in “instructional support” is not provided to paraprofessionals at this school (44%).
- 9) External data on student performance are seldom available in time to improve instructions or accommodate student needs (40%).
- 10) The daily schedule in the school makes it impractical for teachers to collaborate (35%).
- 11) Teachers find it hard to collaborate because there are few common teaching assignments (31%).

Review of the Findings

Close examination of the common strengths provides some degree of promise because it portrays most schools as places where knowledgeable, skilled and committed teachers are working in collegial, trusting environments that favor professional collaboration that should

promote effective instructional and assessment practices. The main barrier that limits teachers' professional collaboration is a daily schedule that reduces common teaching assignments and makes it difficult for teachers to collaborate during instructional hours.

Teachers report that principals collaborate with teachers in the majority of schools and that this sharing of leadership on pedagogical and policy matters strengthens the overall leadership capacity of schools. The sustainability of high leadership capacity may be jeopardized when current administrators retire because teachers report very little input into the hiring of their replacements. The leadership barriers we found reinforce those that were identified within school culture. Teachers report little or no input into the creation of the teaching timetable or the assignments of non-teaching support staff. The remaining barrier in this section is connected with the inability for teacher collaboration. Teachers expressed a concern that external data are seldom available in time to improve student learning. This concern might be eliminated if teachers were given adequate time to develop, score and analyze common assessments at the school level.

Teachers in the majority of schools indicated that they were encouraged to collaborate so they could learn effective instructional and assessment practices. In a province that espouses inclusionary practices it seems that effective practices that focus on special needs groups would include a component that focuses on the teacher-paraprofessional partnership. Nearly every school reported that this in-service was lacking. Furthermore, nearly half the schools reported little or no training for paraprofessionals in the area of instructional support to teachers. The remaining two barriers once again connect with the lack of teacher collaboration. Although collaboration was being encouraged, the majority of teachers in nearly half of the schools

indicated that lack of time provided to meet during the instructional day results in lesson planning and assessment being individual rather than collaborative practices.

Conclusion

As we review the findings it is important to remember that sharing of leadership and professional collaboration were the two key concerns highlighted by Morehouse and Tranquilla (2005). Our review of the literature both before and after our study provide us with some important insights on the topics of sharing leadership and professional collaboration. Lambert (1998) argued that leadership should be a “reciprocal learning process” that leads “to a shared purpose of schooling” (p. 9). Donaldson (2006), in his work with Maine’s principal academy, reinforced Lambert stating that “leadership is a relational, not an individual phenomenon” (p.7). Fullan (2010), commenting on leadership for whole-system reform, described leadership as a collective rather than individual capacity. In his seminal work on change Fullan (1991) addressed the kind of leadership that needed to be shared by citing Little (1981) who said “school improvement is most surely and thoroughly achieved” when “teachers talk about teaching practices,” “teachers and administrators frequently observe each other teaching,” “teachers and administrators plan, design, research, evaluate and prepare teaching materials together,” and “teachers and administrators teach each other the practice of teaching” (p. 12-13). Little (1987) later referred to these processes as “productive collaboration” characterized by “frequent, continuous, and increasingly concrete and precise talk about teaching practice (p. 12). While Ryan (2006) posited that collaboration can “have a positive impact on teaching and learning” and “leadership efforts should be organized to support it” (p. 125), Lambert (1998) argued that “although collaboration is key in school organization, it can also have its dark side” (p.84). She

warned against the overuse of collaboration in ways that drain teacher energy. Hansen (2009) also addressed the dark side reminding us that collaboration is not an end in itself and that certain kinds of collaboration were worse than no collaboration. We would do well to listen to these authors and realize as Schmoker (2005) does, that true learning communities are characterized by disciplined professional collaboration and ongoing assessment. His arguments stem from his belief that “teachers learn best from other teachers, in settings where they literally teach each other the art of teaching” (p. 141).

The barriers identified in culture, leadership, and teaching need not exist. In the large majority of the schools in this study teachers indicated that the knowledge, skills, and dispositions required to engage in shared leadership and professional collaboration were present. The potential to improve student learning in the schools in this case study is clear and it is immutably tied to shared leadership and professional collaboration—two cornerstones of learning organizations (Lambert, 1998). It is ironic, however, that when we set about determining the barriers that could prevent the adoption of the PLC approach in schools we never dreamed that our efforts would identify so many avenues to overcoming these barriers. We began our research with the premise that the purpose of schooling was to prepare students for a future in a rapidly changing and ever more complex and interdependent world. We argued that we needed a learning organization approach to prepare our students for this world. We conclude with the realization that this approach is within our grasp. We close this article with two crucial questions that will guide our future research: How do we get there? And how will we know when have done so?

Appendix A

School Instrument Statements Used to Represent Four Measures

A. CULTURE	
1.	This school has a culture of collegiality, trust, and commitment.
2.	The culture in this school supports professional collaboration.
3.	Teachers in this school have the time to collaborate with their colleagues regarding student learning.
4.	The impact that structural factors have on professional collaboration are addressed in this school.
5.	In this school we recognize the importance of effective communication.
B. LEADERSHIP	
1.	School leadership in this school is grounded in effective organizational practices.
2.	Building of leadership capacity among both teachers and support staff reinforces learning for both teachers and students in this school.
3.	The sharing of leadership strengthens the leadership capacity of this school.
4.	Decisions in this school are based on careful analysis of school based data on student performance.
5.	Decisions regarding resource allocation are made by those most involved in their use.
C. TEACHING	
1.	Teachers in this school are encouraged to use professional collaboration to learn effective instructional and assessment practices.
2.	Instructional practices in this school meet the needs of students of all ability levels.
3.	Effective lesson planning is vital for improving student achievement in our school.
4.	In this school, interventions are provided to students who require additional support.
5.	In this school, assessment is a key component of instructional practices and contributes to student learning.
D. PROFESSIONAL GROWTH & DEVELOPMENT	
1.	In this school professional growth is a multi-faceted, systemic, and on-going component of school improvement efforts.
2.	Professional growth is supported in this school.
3.	Our teachers have the knowledge, skills and dispositions to engage in professional collaboration.
4.	Professional development for teachers is organized using a comprehensive plan focused on the school's vision.
5.	In this school, mentorship provides for professional growth.

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