

**A Comprehensive Framework
for
Continuous School Improvement**

June 2013

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3. Best Practices for Quality Instruction

The development of this third component is underway and is expected to be completed in 2013/14. It will involve consultation and partner engagement at various levels. A document describing this component will be sent to schools once it has been completed.

Continuous School Improvement Framework

Context

The Continuous School Improvement (CSI) Framework is a conceptual design that reflects the evolution of our school improvement journey in Nova Scotia. In many respects it is a continuation of our successes from the past, a change in emphasis and the introduction of current knowledge about how to successfully lead and sustain school and system change. This framework is intended to be a guide to help schools and the province move to the next level in our efforts to improve schools and student achievement, embed learning community strategies, and help teachers work together to continually improve their instructional practices. The CSI framework is a working document that will change as we gain more knowledge and experience over the years.

The Framework

The framework's purpose is to provide a reference point for understanding and communicating what we have learned about best practice and promising practices for

1. developing professional learning communities (PLCs)
2. leading and sustaining school improvement
3. improving a school's instructional effectiveness

We believe these three powerful research-based change processes need to be working simultaneously and effectively to significantly increase student learning and achievement throughout the province. We need to create inter-connectivity among how we lead school improvement, how educators work together within a learning community, and how we engage in instructional improvement initiatives. In this case the whole is much greater than the sum of the parts.

Learning community practices frame how teachers learn best together and how they collaborate within a team structure to expand their individual and collective knowledge and skill. To ensure these professional development efforts have an impact on student learning and achievement, professional community work must first and foremost focus on helping all teachers embed the most promising teaching strategies and methods in their everyday practices. Study and investigations in the province over the past three years support the inclusion of specific teaching practices that have the most promise and are considered best practices in the professional literature. In addition to engaging educators in learning community practices focused on instructional change, developing a coherent and targeted school improvement plan can provide a school with clear direction, shared priorities and a sustainable strategy for school growth.

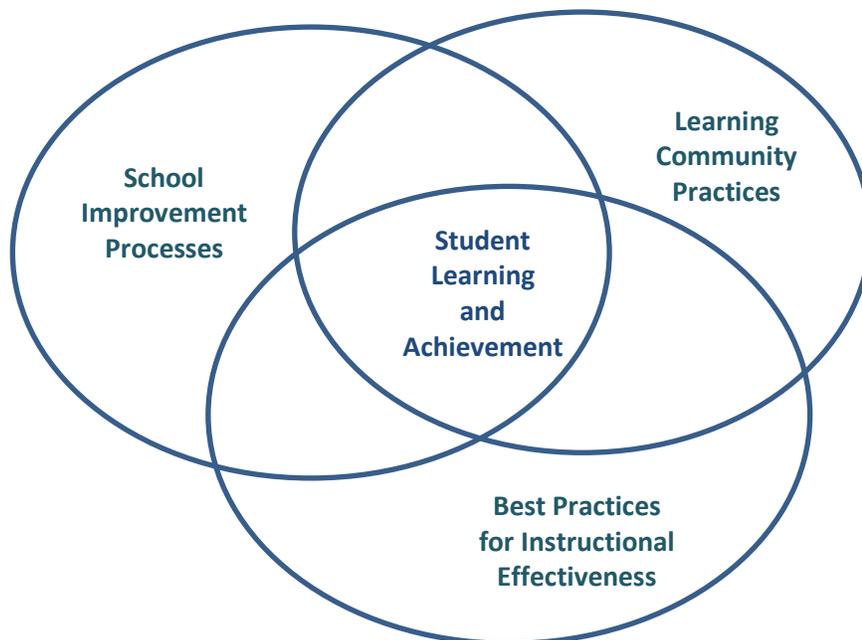
When educators are successful in creating interdependence among these three change processes – learning communities, school improvement planning, and effective instructional and assessment

practices, they transform the core culture of their school. Teachers feel less isolated in their classrooms. Authentic teamwork increases among teachers as they collectively engage in rigorous curriculum planning, instructional design and delivery, and assessment work. School administration and staff expect and establish exemplary teaching practices across all classrooms. There needs to be a tight alignment of and coherence among the intended curriculum, instructional methods, and assessment practices. Relationships among the adults in the school will be respectful and supportive and students will be highly engaged and successful in their learning. Parents and community members will actively participate in partnerships with the school.

The goals outlined in this brief introduction of a learning community, the engine that drives school improvement and instructional improvement, are not beyond our reach. Many schools in Nova Scotia have achieved tangible success in their school improvement efforts. The goal now is for all schools to continue in their efforts to be authentic learning communities and for our students to be beneficiaries of an outstanding school system.

The successful implementation of the professional practices described in this document will bring our province to a higher level of effectiveness in continuous school improvement. The successful integration of school improvement planning, professional learning community practices, and intentional and focused instructional improvement work will most importantly lead to significantly increased growth in student learning and student achievement.

Continuous School Improvement



FOUNDATIONAL ELEMENTS

These foundational elements are critical to our success and need to guide the collective behaviour of Nova Scotia educators and other leaders throughout this complex and systemic change process. It is critical to the success of the CSI initiative that we

1. maintain a focus on student learning, student achievement and instructional improvement.
2. ensure that the needs of all learners are met within a socially just and equitable environment.
3. deepen and expand ongoing teacher collaboration in all Nova Scotia schools.
4. maintain respect for the professional educators in our schools who have a wealth of knowledge, skill, and experience to contribute to school improvement.
5. increase trust across the system and within all school communities.
6. address priorities through a balance of centralized direction and school autonomy.
7. continue to build capacity in the system through ongoing and effective professional learning and by providing human and material resources and support.
8. support principals in the continued development of their knowledge and skills to be effective instructional leaders.
9. foster political and public support for these change initiatives.
10. engage provincial and school board leadership who can guide, monitor, and support these changes.
11. ensure our actions are consistent with research-based practices and effective change strategies.

The next sections in this document describe the structures and processes that schools will need to embed in their work as we move forward. This framework for continuous school improvement, instructional improvement and professional learning communities is intended to be a guide for school boards, schools and the Department of Education and Early Childhood Development as all partners work together to create a learning community culture throughout the public education system.

1. SCHOOL IMPROVEMENT PLANNING

The school, under the leadership of the principal, is responsible for developing the school's improvement plan. The school improvement plan serves as a road map for the changes and results the school strives to achieve. School improvement planning involves the collaboration of teachers and school administrators. School support staff and the School Advisory Council also have an important role in this process. At times schools have also directly involved students, parents, and community representatives in the planning and decision-making processes.

School improvement planning typically begins with a self-assessment that involves collecting and studying data/evidence to help determine where the school appears to be effective and where improvements are needed. This exercise establishes the school's strengths, challenges, needs, and wants.

When your school is collecting data/evidence to determine your school's improvement goals, you need to examine a variety of sources, such as

- classroom data
- common assessments administered across grades and curriculum content
- provincial assessments administered in math and literacy
- survey information collected from parents, students and teachers (EECD surveys, Tell Them From Me, board level surveys, school level surveys)
- board-based assessments
- data sets related to graduation rates, dropout rates, attendance, etc

In order to make informed decisions about your school improvement goals, it is important to study your school data and to have open, honest and constructive discussions about what the data mean. The reasons for these discussions about data are to increase teachers' reflection, to identify student needs, and to support changes in teacher practice. People may need encouragement from school leaders to have these conversations because disagreements will likely occur. Expressing and working through differences are critical to the success of school improvement.

You may begin the self-assessment of your school by organizing group consensus-seeking discussions with staff about the school's strengths and vulnerabilities, then search for data/evidence to confirm or counter your collective conclusions. This approach will help to target your data collection process.

The next stage, following the self-assessment, is for the school to develop improvement goals that can be addressed over one, two or three years, depending on the school or school board context. Goals need to clearly articulate the results people want and expect to achieve. Goals also help to create a

collective responsibility to work together on the same growth targets. The means may vary, but the ends are common to all. Goals must be specific enough to be measurable but broad enough to be inclusive of all students.

In the Continuous School Improvement framework, collaborative learning teams (horizontal and vertical) now work together to identify how their team can contribute to the overall success of school improvement . This is where school-based collaborative learning teams engage in learning community practices (described later in this document) to help achieve school improvement goals. This process must include strategies to address gaps in achievement for specific students. This is what we mean when we refer to collaborative learning teams, within a professional learning community, as the engine that drives school improvement.

School improvement planning also involves identifying how to monitor implementation and evaluate your growth. This means gathering formative feedback during implementation, with an emphasis on classroom assessment data, so that you can determine your progress and make adjustments. It also means gathering data over time so that you can make comparisons to your baseline or starting point and reach conclusions about the school's growth.

This move to CSI is a major and intentional shift away from developing elaborate and complex school improvement plans. It places more emphasis on engaging teachers in an ongoing cycle of reflection and action, within a professional learning community culture. The real work of school improvement is now clearly focused in the classroom on instructional improvement.

School Improvement Plan

There are fundamental components to a school improvement plan and we recommend that schools include these components when developing their plan. We anticipate that school improvement plans may look different from school to school, or from board to board. In the CSI framework the fundamental components include

1. a short description of the school that gives the reader essential information about the structure, experience, and culture of the school
2. a short description of the data collection and data analysis process that educators engaged in while developing their School Improvement Plan
3. school improvement goals that are clear, measurable and results-focused. These goals can be: school-wide; at grade levels; department-based in middle schools and high schools; or

curriculum-based across grade levels. The number, content, and time frame of goals are determined by the school, in consultation with assigned personnel at the board level.

4. A short explanation of how the school is going to monitor and assess school improvement growth over time.

It is also expected that a short annual report will be written and circulated to update the school community on the progress of the school's improvement goals.

Teams to Support School Improvement

Consideration should be given to establishing two teams, a Peer Assessment Team and a School Assessment team, with different functions within each school board. These teams can provide timely feedback, additional support as needed, and a cumulative review of progress and achievements for schools. Members of these teams can be selected, as needed, from principals, teachers, and board-level leaders. The School Assessment Team may include representatives from the Department of Education and Early Childhood Development, if the superintendent requests these members. The responsibility for organizing these teams will be at the school board level.

Peer Support Team

This small team can visit the school periodically to give formative feedback on how school improvement is progressing. The superintendent may schedule these teams in schools throughout the year or the principal may invite a team into the school at critical points. There also may be times when a peer support team will be asked to provide targeted intervention to a school. The purpose of the peer support team is to provide constructive feedback to the school, and to collaborate and strategize with staff to map out an alternative way forward.

School Assessment Team

This small team can visit the school to lead an assessment of progress and achievements, and determine the extent to which growth or improvement has occurred. Once an assessment has been completed, the team will then recommend special recognition for the school, if evidence of significant growth has been presented. The responsibility for providing this school recognition will be at the board level, under the direction of the superintendent.

2A. PROFESSIONAL LEARNING COMMUNITIES

The Nature of Community

Like many other concepts in education, “community” is used in everyday conversations as if its meaning is universally understood and its existence is everywhere. Unlike formal organizations, where internal relationships are built around specified tasks, roles and institutional goals, this notion of “community” is built around less formal relationships but with shared values and a common purpose. While requiring people to collaborate to achieve organizational goals is not likely to result in the creation of a sense of community, a sense of belonging and common purpose can emerge over time with the right set of conditions.

These ideas of community are closely aligned with the South African concept of *ubuntu* (*oo-bun-too*). Ubuntu is the African philosophy of humanism, linking the individual to the collective, building on the importance of belonging and interdependence. People with ubuntu are willing to share, willing to be vulnerable, affirming of others, and they have a self-assurance that comes from knowing that they belong in a greater whole. Ubuntu does not discount the importance of the individual but it recognizes that belonging gives meaning and resilience, enabling people to survive and thrive in the face of adversity.

The philosophy of ubuntu can be extended to a professional learning community which embodies the primary values of

- humanness (warmth, tolerance, understanding, and respect)
- caring (empathy, kindness, helpfulness, and friendliness)
- sharing (giving unconditionally, altruism, and redistribution)
- compassion (cohesion, forgiving, and spontaneity)

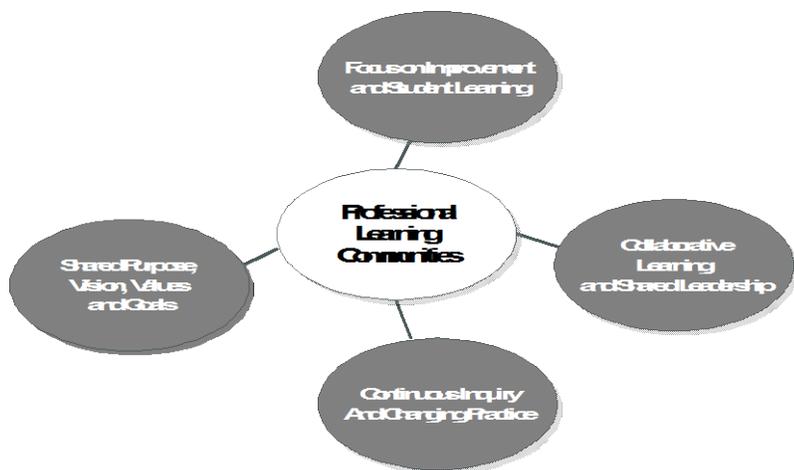
Humanness, caring, sharing and compassion are fundamental to effective teaching and learning practice, and they are critical in building strong community.

Definition and Components

Our definition of a PLC clearly establishes our beliefs about the purpose and outcomes of an effective professional learning community:

“A Professional Learning Community is a group of professional educators working together on evidence based collaborative teams in a climate of trust, innovation, risk taking, and reflection to enhance their practices so that all students are successful in meeting essential curriculum outcomes.”

The four critical components comprising the Nova Scotia approach to PLCs include:



1. Focus on Improvement in Student Learning

The work within a collaborative learning team must have a direct impact on increasing student learning and achievement. This means continually asking and answering five critical questions:

- What do we expect students to learn?
- How do we know they learned it?
- What do we do when they have not achieved the curriculum outcomes?
- How do we ensure exemplary teaching in every classroom?
- Are our change efforts working?

Within a collaborative learning team there is a clear focus on results where teachers and administrators engage in ongoing conversations about the individual and collective progress of students. Teachers and school leaders understand the expected curriculum outcomes, and assessments are developed around these outcomes. Appropriate student interventions are developed in a timely and systematic manner for students, and best practices in instruction can be observed in every classroom.

2. Collaborative Learning and Shared Leadership

Within a collaborative learning team, teachers have opportunities for team learning and shared leadership. Collaborative learning means learning together about promising practices in curriculum

implementation, instruction, and assessment. Shared leadership means people are engaged in democratic practices that help shape the decision making within the school community. It also means that leadership is a collective responsibility and a commitment to work together for all students in a school. Everyone is a leader.

3. Continuous Inquiry and Changing Practices

In a collaborative learning team, educators are engaged in continuous improvement cycles where teachers and administrators collectively examine student data and student work, and then develop strategies to respond to evolving student learning needs. It means asking hard questions and having professional discussions about why results are not being achieved. It also means celebrating achievements. Ultimately collaborative learning teams are intended to support teachers as they work to improve their instructional practices.

4. Shared Purpose, Vision, Values and Goals

A professional learning community creates a shared purpose because members are guided by a vision of success that is rooted in fundamental beliefs and principles. In a PLC members are committed to achieving learning goals for every student. They also focus on creating an engaging and positive learning environment in the school for both adults and students. This values-driven community of learners also has clear expectations about how the learning community will work together to achieve these results. Everyone in the community is a learner, and each person has a responsibility to encourage and support others.

No One Single Model for Effective PLCs

It takes time for members to build an effective PLC where there is interpersonal trust, where new ideas can develop, and where members feel comfortable raising sensitive issues. Over time, many communities that support teacher learning develop their own ways of working together. They develop their own ways of structuring conversations, discussing, debating, and thinking about teaching and learning. This kind of developmental process must be allowed to emerge. These regular and ongoing conversations help to create and sustain the interpersonal relationships and are necessary to achieve the higher collective purpose of their PLC.

As trust and school culture develop, PLCs begin to engage in jointly constructing a common knowledge base. Teachers begin to talk deeply about teaching and learning in a way that makes their tacit knowledge more visible. They question assumptions about teaching practice, and together teachers examine school and student data and information to generate new ideas and hypotheses

about student learning. Teacher collaborative learning teams then begin to use a wide range of student work, school artifacts, action research, and professional literature in their work together.

Members of a PLC will have different perspectives on what it means to enhance student learning and what it will take to get there. They will approach the relationships between knowledge and practice differently depending on their goals and shared philosophies. As a result the focus and methods of different PLCs will vary considerably.

It is critical to highlight that, although the focus and methods of PLCs will vary, at the highest level learning communities in schools always share the goal of enhancing student learning and building a collaborative learning culture in a school. The fundamental goals of a PLC are to facilitate improvement or changes in professional practices, to increase student achievement, and to expand students' life opportunities.

Structure, Design and Focus of Collaborative Learning Teams

The concept of a professional learning community is built on teams, collaboration within teams, and collaboration across teams. When we refer to a professional learning community in this document, we mean a school. Collaborative learning teams are small groups within a school that do the work together and help to build a sense of community across the whole school. However, it has become commonplace to refer to certain projects, programs, networks, and collaborations among teachers as professional learning communities. This term is more often than not misused to depict any group effort with a common goal.

The core or fundamental structure of a professional learning community is a collaborative learning team that is responsible for the planning and implementation of ways to improve teaching and learning throughout the school. These teams work with a shared purpose and common goals in an environment of continuous inquiry and reflection intended to improve instructional practices that will increase student learning. All four elements must be present in a collaborative learning team.

These school-based teams, typically three to four members, can be organized horizontally with teachers at the same grade level working together. They can also be organized vertically where teachers collaborate across grade levels to systematically align curriculum, instructional strategies and assessment practices. Teachers can also engage in networked learning communities and virtual learning communities that connect them to educators beyond the walls of classrooms and their school. We encourage these activities to augment the learning and reflection that happens in a school-based learning team.

The primary focus of the collaborative learning team is to help teachers learn new content, ideas, and strategies that will increase their effectiveness in the classroom. It is a meeting place where student and teacher needs are highlighted and decisions are made together about how to best address these learning needs. The intent is that teacher learning in a collaborative learning team leads to changes in instructional practices in the classroom.

The collaborative learning team strategy includes time for the whole staff to come together for school improvement, to share ideas across collaborative learning teams, and to examine school-wide student achievement data. These whole-staff meetings provide a level of consistency and coherence with the school's improvement plan and overall strategies.

However, the substantive learning community work will happen in collaborative learning teams. These collaborative learning teams learn and improve practices together by

- investigating the most promising practices in instruction to increase their knowledge base about what works
- examining and analyzing disaggregated student achievement and classroom data
- selecting an area of student need and experimenting with changes in practice
- sharing professional practices and expertise from their classroom experiences
- collecting formative and summative assessment data from classrooms to improve instructional decision making, and
- paying attention to increasing their effectiveness as a team

There should be a clear connection between the goals and activities of a collaborative learning team and the overall direction of school improvement. Teacher professional learning should also be aligned with the bigger picture of school improvement efforts. There needs to be a balance between the autonomy of collaborative learning teams and the collective effort of a school to work together for all students. Schools and boards will need to find this balance.

Teams typically document their activities, decisions and the thinking behind their decisions in a meeting journal. This information can be very helpful over time as team members reflect on their improvement journey. Sharing their meeting journals with the principal can also serve as an important communication tool and a way for school leaders to monitor improvement efforts across teams and throughout the school.

It is also important for teams and schools to take time to celebrate successes. These celebration exercises not only acknowledge educators for their efforts and their accomplishments, but also serve to remind people about what's important and their school values.

Role of the Principal in a PLC Environment

The principal plays a critical role in building a professional learning community culture characterized by caring, trust, and respectful relationships. These interpersonal dynamics and the creation of a positive climate help to motivate teachers to want to engage in collaborative inquiry for instructional improvement. The principal's role involves supporting the development of agreements around the underlying beliefs and assumptions that affect teaching and learning. The principal also needs to create learning opportunities for teachers to serve as instructional leaders in the school, and to model how to work collaboratively with staff in communities of practice.

There is a delicate balance between understanding that effective PLCs need to chart their own course, and maintaining an appropriate level of direction. A critical responsibility for the principal is to ensure there is productive dialogue during learning community conversations that help to create and sustain an emerging culture of collaboration. These conversations need to engage educators in dialogue about their critical role in student learning and achievement. In this process, it is important that the principal hears and values the voices of all learners in the school, and celebrates the achievements of individuals and teams.

2B. Selected PLC Practices that Make a Difference

There are many group learning and improvement practices that professional learning communities can engage in to increase their capacity to impact student learning and achievement. The following seven practices that we identify and briefly describe are the practices we recommend school-based collaborative learning teams focus on while doing professional learning community work. Although there are other practices and strategies that may be effective to a degree, these seven are the core strategies that appear to have the most promise for achieving results. During our study of the current research and professional literature, as well as our investigations of real life experiences in schools, these practices appear to be identified consistently as having a positive impact on student learning and student achievement. These practices include

1. Data Analysis
2. Classroom Observations
3. Developing Common Assessments
4. Instructional Design
5. Examining Student Work
6. Lesson Study
7. Action-Oriented Study Groups

Ideally a school staff will decide what PLC practices they will learn and implement. These decisions should be based on the needs and interests of the school. In the end, the collaborative learning teams within the school will be responsible for managing and leading these learning experiences for teachers and building a team commitment to transfer the learning into their classrooms. School administration cannot do this alone without the effective leadership of teachers within an authentic learning community culture.

The brief descriptions of the seven PLC practices in this document are intended to give readers very basic information about the practices. The Department of Education and Early Childhood Development will publish a series of more in-depth 'how-to' booklets about these seven practices that Nova Scotia schools and teams can use as a resource in their continuous school improvement work.

1. DATA ANALYSIS

Data analysis can be a powerful form of learning that leads to action for collaborative learning teams. Studying and understanding data about how the school, students, or teams are doing is fundamental to school improvement. Exploring the data helps educators understand the depth of the challenge before them, and helps to identify the strengths and talents upon which the school community and team can build. Data analysis can also assist the collaborative team or school identify what needs to be done to improve. It simply makes sense that, if the school or team uses data wisely, educators will make better decisions.

The focus of data analysis always needs to be on improving learning and achievement for all learners and on increasing the quality of work done within the school. Data analysis fits within a professional learning community or learning team because it is collaborative and inclusive, and it provides opportunities for teachers to engage in reflection and inquiry.

It is important to spend time helping the staff or collaborative learning teams understand why gathering and analyzing certain data is critical to school improvement. Early in the improvement process it may help to share examples from another team or school so teachers know what a final product looks like.

Typically a school needs to examine different types of data such as demographic, student achievement, perceptions of stakeholders, as well as school processes and practices. Once the data are collected the team needs to examine each type by itself and then study how the different data sets relate to one another or the whole.

Data analysis typically involves the following six steps:

1. Make a list of the data the school or team needs to gather. Discuss what is essential information and ensure you do not fall into the trap of collecting too much or too little data. Be clear on the purpose of your data collection and reach agreements on the questions you want answered at the end of the process.
2. Depending on the nature of the information you want to gather, the team will need to decide what method they will use to collect the data (e.g. assessments, interviews, focus groups, surveys). Also the team will need to decide on how to share the data collection and data analysis workload.
3. Once the team has collected the information, graph the data. Graphing the data turns the information into a picture or visual. Graphs or visuals are easier for people to understand.

4. Pull together the results in a short report that provides a preliminary summary. This summary will make it easier for the staff or teams to read and analyze the information. Recruit volunteers to pull the report together and consider providing additional time as needed for this work.

5. Bring the team or staff together to analyze the results. Begin by asking people to read through the information independently. Next, present a series of questions and ask each member to record his/her thoughts about strengths, challenges and implications for action. Structure small group discussions where participants can elaborate on their thinking, challenge the data, and then come to agreements on what the data really mean. Talk about the patterns you see and identify where there appear to be relationships among the data sets. Participants need to see the big picture and the themes embedded in the data. This step is critical in the process as it is where educators construct meaning from the numbers and information.

6. Determine next steps. The team or staff must now use the data discussions and conclusions of the group to decide where they will focus their attention, what needs to take priority in terms of their improvement goals and strategies.

The data analysis process can be targeted on one dimension of classroom life or it can be very comprehensive with data collected from varied sources across multiple inquiry questions. Regardless of the purpose of the data analysis, it is critical to gather the right data, to conduct a thorough analysis so that people have a common understanding about what the information means. Staff or team members are to be included in analyzing the results. In many ways participating in data analysis helps to tell and understand the story of your school.

2. CLASSROOM OBSERVATIONS

It is critical in a professional learning community that teachers open their classroom doors and share their professional practices with colleagues. Conducting classroom observations is a very effective way of spreading the knowledge and skill that teachers have developed over time. Teachers need to visit one another's classrooms on a regular basis to observe instruction and then discuss teaching practices with the teacher they visited. This learning community practice is intended to be peers helping peers. Educators must guard against it becoming an evaluative process where judgments are made about a teacher's competencies. Mutual respect and trust are pillars of this risk taking activity because teachers need to be comfortable with sharing their successes in the classroom, as well as their struggles.

Because of the history of isolation that has been the norm in the teaching profession, teachers will not typically engage in this learning practice early in the life of a learning community. As the sense of community grows in a school, classroom observations can become a high leverage improvement strategy.

A single teacher can visit a colleague's classroom to observe, take notes, and engage in one-on-one discussions about what was taught, how it was taught, and what students learned. Typically, the classroom observation strategy is organized around group activities where teachers participate in walk-throughs, group coaching, or instructional rounds. These are simply structured ways for more teachers to participate in classroom observations as a professional development activity. The purpose of these structured classroom observations is to build the knowledge and skill of participants and to help translate knowledge into practice. They are also intended to provide feedback to teachers and the school on instructional practices they are trying to implement or improve. Classroom observations provide a structure, time, and place for teachers to talk to one another about their professional practices.

There are a variety of structured group classroom observation strategies that are tightly designed and have their own unique characteristics and guidelines. Rather than describe each in detail, we have identified generic steps that appear to be consistent across these classroom observation protocols. The number of teachers involved and the steps in the process can be adapted to serve the needs and resources of the school.

Typically the classroom group observation process involves two, three, or four teachers, released from their teaching duties for one or two instructional periods. Substitute teachers are often hired to teach their classes during these periods.

Also, this strategy is much more successful if the school or board has an agreed upon description of high quality instruction.

Step 1 Focus

The focus of the group observation can be an instructional problem or challenge experienced by teachers across classrooms. The focus can also be on new curriculum or program implementation where teachers are trying to align new content, instruction, and assessment practices.

Step 2 Observation

Teachers are given clear direction on what they can expect to observe during their classroom observational visits, or what the instructional problem appears to be. They are directed to take notes while observing the instructional practices. Teachers who are observing the lesson are asked to record where practices are consistent with expectations, where there are inconsistencies with expectations, and ideas for improvement. If the group is trying to analyze an instructional problem, the group is asked to record their observations and why they believe the problem is occurring.

Step 3 Debriefing

Teachers who participated in the classroom observations gather to discuss their perceptions and to begin talking about feedback and possible suggestions or solutions for improvement. There are usually questions to guide these discussions, similar to the following:

- What did we observe?
- Why was this happening?
- Where was the teacher consistent with expectations? Where was the teacher inconsistent with expectations?
- What impact did his/her instruction have on student learning?
- What impact did his/her instruction have on student engagement?
- What suggestions do we have for strengthening implementation or how to address this instructional problem?

Step 4 Reporting

This is typically done in a staff meeting where the group or groups who conducted the classroom observations report what they learned, comment on consistencies and inconsistencies, and present strategies on how to make improvements in instructional practices throughout the school. If the

group was responsible for examining an instructional challenge, they share their ideas on how to solve the instructional problem.

The group does not give individual feedback to teachers, before, during, or after these group observations. The purpose of group observations is for the staff to come to a common understanding of the instructional strengths and challenges across classrooms. On the other hand, when an individual teacher visits a colleague's classroom and they have a one-on-one discussion, then giving individual feedback is appropriate.

3. DEVELOPING COMMON ASSESSMENTS

A Common Assessment is an assessment typically created collaboratively by a team of teachers responsible for the same grade level, course, or content area. Common assessments measure essential student learning, include both formative and summative uses, and are created by teachers. They reflect the most important understandings and student performance outcomes for every unit of instruction. The assessments are administered in a systematic and timely manner, typically do not exceed 25 questions (where questions are included in the assessment tool), and they include all students taking the same course or grade level assessment across classes and teachers. They allow for the analysis of results within a collaborative team where item analysis is planned and occurs immediately following each assessment.

The development of common assessments can be a powerful tool for aligning curriculum with outcomes, reaching consensus on priorities for instruction and assessment, pacing curriculum implementation, and generating discussion while building common language among teachers and students.

Typically, common assessments are used for three purposes:

- to determine prior student learning and to make initial decisions related to the level of instruction, grouping, and instructional strategies. These assessments are typically administered at the beginning of the school year or unit of study (diagnostic)
- to provide information to students and teachers during the teaching/learning process and provide important information for differentiating instruction. These assessments are typically embedded in instruction and may take the form of brief, narrowly focused assessments providing immediate feedback on narrowly defined outcomes and/or curriculum (formative)
- to provide information as to how well students have done and provide information both for student level decision making and for program evaluation. These are typically designed to be administered at the end of a unit, end of quarter or semester, or end of course (summative)

The following description provides one approach to the development of common classroom-based assessments. Also, while the process is presented in briefly described steps, each step requires considerable thought, study, and attention to detail and quality control.

1. Define the purpose:

Clearly define the purposes of the assessment. Is it diagnostic, formative, or summative? How will the results be used by students?

2. Identify the set of possible curriculum outcomes to be assessed:
Which curriculum outcomes are 'fair game' to be assessed?

3. Balance of Representation:

What is the relative weight to be assigned to each curriculum outcome or set of outcomes?
The balance of representation in the assessment should reflect the relative importance of the outcome or set of outcomes for this assessment, based on the emphasis of the unit, the reporting period, or the course.

4. Develop an Assessment Blueprint:

What item types will be included in the assessment, and in what proportion? Common item types include the following:

- Multiple choice items - can be used to cover a wide range of content; they are efficient in that they take relatively little time to answer or to score
- Short-answer items - best used to assess defined problems with limited solutions, such as math computation. Students must demonstrate knowledge and skills by generating rather than selecting an answer.
- Constructed response items - typically require students to apply higher order thinking skills, such as analysis, synthesis, and evaluation. These items are often scored using a rubric, and agreements around scoring are essential.
- Extended response items - also assess higher order thinking and often involve multiple solutions and require the student to justify his/her answer.

Decisions regarding item types for classroom-based common assessments require consideration of the outcomes assessed, the assessment time available, and the investment of time and effort in scoring. For example, given a 90 minute assessment block, a high school science assessment might include 20 multiple choice items, five short answer, three constructed responses, and one extended response. An additional decision is whether the assessment is timed (in this example everyone finished at the end of 90 minutes) or open-ended (90 minutes is expected, but students can work as long as they are working productively).

5. Select or Develop Items:

If high quality items already exist and are available, it is almost always best to use them rather than create new items. Access to item banks is of considerable value; however, it is often necessary to create items to meet individual needs. These item banks can be developed at the board or provincial level.

In initially selecting or developing items it is best to select more items than you will actually need, perhaps as many as three times depending on the importance of the assessment. Make sure that you have enough items so that there is a reasonable expectation that you can fill your assessment blueprint.

6. Field Testing Items:

Field testing allows you to see how the item actually behaves with your students and provides item statistics that can let you make decisions as to which items to include in the assessment. Again, field testing is most practical, and most important, with high stakes summative assessment.

7. Develop the Assessment:

Use the items identified as successful from the field test, and be careful not to select all very difficult or all very easy items. Consider the item difficulty and cognitive complexity when building a balanced assessment. In terms of cognitive complexity, it is appropriate to consider depths of knowledge expected such as recall and reproduction, basic application of skills and concepts, strategic thinking, or extended thinking.

8. Administer and Score the Assessment:

Establish common protocols for administration. These may include, for example, a common set of instructions, common protocols for response to students' questions, or materials allowable (such as dictionaries, calculators, or computers).

9. Set Cut Scores:

If the assessment is tied to grades, you will need to make decisions as to what performance level is needed for each grade. This is typically done by setting 'cut scores'. For assessments to be common, these must be the same across teachers and sections of students. Cut scores are often used to determine whether students meet or exceed overall standards of performance.

Reflection

Reflection is an important part of the assessment process. Consider the following questions to guide collaborative team discussions after the administration of assessments:

- How did the assessment meet the desired purpose and provide a valid measure of the targeted understanding?
- Is the evidence from the assessment sufficient to determine the extent of student understanding and to inform future instruction?

- Did the assessment data provide the expected information?
- How did the assessment encourage communication with students about learning?
- Were the results understandable to students?
- How did the results provide insights to students about their progress?
- Did the questions address the targeted outcomes sufficiently?

Developing common assessments can be one of the most effective improvement strategies that collaborative learning teams can use to increase student achievement. This is particularly true when groups of teachers develop and use common formative assessments. Using common formative assessments within teacher teams helps to align the intended curriculum, the taught curriculum, and the assessed curriculum.

4. INSTRUCTIONAL DESIGN

Instructional design refers to different frameworks that are used for planning units of study and sequenced lessons, for formative (assessment for learning) and for summative assessments (assessment of learning), for methods of instruction, and for instructional events and activities. Instructional design typically involves yearly curriculum planning, unit planning, and lesson planning.

There are many models of instructional design and most share these common elements:

1. identifying the learning outcomes that students will be expected to achieve
2. identifying and describing success criteria
3. identifying the ways that students will demonstrate that they have achieved the learning outcomes
4. designing instructional events and activities that immerse students in shared, guided, and independent learning
5. designing corrective instruction, adaptations, and extension activities

Teachers usually work together in small groups and progress through a series of stages from developing overall yearly plans for curriculum delivery to constructing the specific curriculum-instructional units and lesson plans within each unit of study. The instructional design process provides collaborative learning teams with a structure that will help teachers tightly align what is intended to be taught, what is taught, and what is assessed.

In the professional literature, instructional design is often referred to as 'backward design', where educators answer a simple question "by the end of this unit, course, or semester, what is essential for students to know and be able to do?" After teachers answer this question, the instructional design process begins by working backwards to identify student learning goals, clear success criteria, instructional approaches, and appropriate assessment practices.

When teachers are developing curriculum units, the instructional design process can be described as three fundamental stages that include: 1. Identifying desired results or learning intentions, 2. Determining acceptable evidence, and 3. Planning student learning experiences. A series of questions, related to these three stages, typically guide teacher discussions and decision making as team members work through the instructional design process.

Step 1. Identify Desired Results

- a. What are the curriculum outcomes that must be demonstrated at the end of this unit of study?
- b. What are the big ideas and learning targets that will direct our work?

Step 2. Determine Acceptable Evidence

- a. What evidence will convince us that students have met the learning targets?
- b. What are the success criteria? (success criteria are often expressed in ‘I can ...’ statements)
- c. What assessment methods and practices will we use to determine the level of success?
- d. How will students be engaged and what will they produce to demonstrate their learning?

Step 3. Plan Learning Experiences

- a. What do students already know?
- b. What are they already able to do related to this unit?
- c. What instructional experiences will highly engage students and deepen their understandings and skills?
- d. How will we differentiate our teaching and assessment practices?

The true value of a structured instructional design process is that it provides a framework for teachers to systematically plan together and to refine their curriculum units and lesson plans over time.

5. EXAMINING STUDENT WORK

An increasingly popular method for helping teachers gain insights into the quality of student learning experiences is to engage collaborative learning teams in systematically examining student work. It is a way to expand the school's sources of data that is often timely, closer to real classroom practice, and more accepted by teachers as reflective of student learning over time.

By examining student work samples, teachers can see what their students really know and are able to do within the context of their classrooms. The exercise of examining student work can also be valuable because it can help educators evaluate the effectiveness of varied teaching strategies.

Educators are often surprised at what can be learned in a structured dialogue and group discussions using samples of student work. These conversations can influence changes in a teacher's or a team's teaching practices and can lead to creative solutions for re-teaching content or organizing intervention strategies for struggling learners.

There are numerous protocols about how to examine student work. In this document we, once again, identify generic steps that appear to be consistent across different approaches. These steps can be adapted to meet the unique needs of teams or schools.

Step 1 Opening

A collaborative learning team leader or the teacher who presents the student work can facilitate the team meeting. The person who leads the meeting typically opens the session by explaining or revisiting the steps in the process for examining student work. He/she also clarifies the timelines for completing the task. The teacher who is presenting the student work then gives basic background information about the pieces of student work that the group of colleagues will examine.

Step 2 Presentation

The teacher who presents the student work then elaborates on the classroom context, giving the group a description of the teaching experience related to the student work and sharing material/resources used during the lesson. The group members are encouraged to take notes. At the end of this presentation the teacher who presents the student work usually identifies two or three questions he/she wants answered about the student work or his/her teaching practices.

Step 3 Clarifying Questions

Group members are given an opportunity to ask questions to clarify any of the information presented by the teacher. Questions need to focus on the 'what?', 'when?' and 'how?' about the student work or teaching practices rather than 'why?'. 'Why?' questions often have an evaluative tone.

Step 4 Writing and discussion

Group members are asked to individually write their responses to the questions initially posed by the teacher who presented the student work. The group members then discuss their written responses to the questions, trying to understand what happened during the student learning activity and attempting to reach agreement on the answers to the original questions posed by the teacher. The presenting teacher simply listens to the discussion and takes notes.

Step 5 Final Reflection

The teacher who presented the student work verbally responds to what he/she heard during the group discussion. The teacher typically responds directly to the applicability of the suggestions and provides clarifications or makes corrections about comments made during the group discussion. Group members can then respond to the presenter's final reflection about their input in order to deepen their understanding about the teaching and learning process.

The practice of examining student work can involve a single example or varied samples of student work. The student material can be organized across different curriculum content areas and can be chosen from work samples reflecting struggling, high achieving or average student work. Regardless of the nature and quality of student work, it is very important that the presenting teacher and the group continue to discuss connections among teaching practices, the student work, and implications for improvement.

6. LESSON STUDY

Lesson Study provides a way for teachers to work together not only to improve a lesson but also to deepen their understanding of content, their understanding of students, and their understanding of teaching. It is a cycle of instructional improvement focused on planning, observing, and discussing lessons and drawing out important knowledge about teaching and learning. This PLC practice helps teachers gain better insights into how students learn best and develops their habits of self-reflection.

Lesson Study consists of a number of planned steps, each of which involves analysis and reflection. These steps may take place over a number of weeks or months. This generally involves a group of teachers

- planning a lesson together
- teaching the lesson in a classroom
- collecting observation data about the lesson
- reflecting upon, discussing and revising the lesson, and
- re-teaching the lesson

In addition, the Lesson Study team documents their efforts, as well as the results of their efforts, during the entire Lesson Study process. It is this process of analysis and reflection that allows teachers to develop an ongoing everyday awareness of how one's actions, reactions, and instruction in the classroom affect student learning. In general, the process of Lesson Study involves a number of steps:

1. Form a Lesson Study team:

Four to six members is optimal for lesson study. Depending on the goals and context, the members may involve groupings within a grade level (horizontal) or teachers who share a content area of focus across grade levels (vertical).

2. Determine Focus:

Lesson Study begins with the team identifying a goal or curriculum area it wishes to explore together. Most Lesson Study teams choose a subject area in which students had difficulty learning or teachers have difficulty teaching. For instance, Lesson Study teams may focus on an aspect of new curricula or challenging outcomes. Once the general subject area is established, the team begins to focus the subject area on a specific topic, and finally, on a specific lesson. Student assessment data may assist in identifying potential target areas.

3. Planning the Lesson:

The Lesson Study team will spend a significant amount of time discussing issues such as: What are the goals of this lesson? What should students know at the end of class? What has been tried? What has succeeded? What has not? Once the team understands the lesson in terms of the larger Lesson Study framework, it proceeds to planning the actual lesson.

Typically, the team will consider many factors when planning a lesson. From the lesson's introduction to the end of the lesson, the team will outline each step of the lesson including the use of learning tools and resources (technology, manipulatives, visuals, etc.) to the use of instructional strategies (small or large group work, rules or directions, vocabulary, etc.)

4. Teaching the Lesson:

One of the team members teaches the lesson to students while the other members observe the lesson and collect data on student thinking, learning, engagement, as well as verbal and behavioural responses and classroom dynamics. Participants will typically record their observations using the following questions:

- Did the lesson's activities support its goals?
- Did the lesson flow appropriately?
- What roadblocks or problems did students encounter?
- Were chosen examples or problems appropriate and did they promote student understanding?
- Were directions clear and concise?

5. Debriefing the Lesson:

Perhaps the most important step in Lesson Study, the debrief session, is an opportunity to reflect upon those parts of the lesson that were meaningful to students, and those that were not. It begins with the instructor's reflections on the lesson as taught, especially any difficulty he or she may have encountered. The debrief continues as the team discusses the data they collected and the differences between what was planned and anticipated and what actually occurred. All observations are focused on the actions and reactions of the students. The discussion of what went well is as important as the discussion of what did not.

6. Planning and Reflection:

What next? The answer varies. Most often, the Lesson Study team has identified areas of the lesson that can be improved, and decide to revise and re-teach the lesson as a group. Other teams decide to re-teach the lesson individually in their own classrooms.

Most Lesson Study team members report a fundamental shift in attitude by participating in this professional learning community practice. Many teachers also report a deeper appreciation of their subject matter, and almost all speak of the benefits of thinking and reflecting upon the art, craft, and science of teaching.

7. ACTION-ORIENTED STUDY GROUPS

Action-Oriented Study Groups are small teams of teachers who function as action researchers. They meet at grade level, across subject areas, or are aligned with a special area of curriculum focus within the school. In study groups, participants identify a student learning need, based on student achievement data, and then focus their professional learning on how to effectively respond to the student need. The goal of Action-Oriented Study Groups is to increase the knowledge and abilities of each member of the group so that they can address the student learning need within his/her classroom.

The central themes in the study group process usually include:

1. What can teachers do to develop greater understanding of the content they teach?
2. What can teachers investigate in order to become effective at curriculum design?
3. What can teachers do to become more skillful in the classroom with their students?

What teachers decide to study in their small groups frames the content of their investigation. It is important to note that the discussion process itself has little power to change what teachers do with students. Without in-depth study and a thorough understanding of the material, as well as agreements to follow through in the classroom, the process will likely have limited impact on student learning and achievement across classrooms.

Action-Oriented Study Groups focus on closing the knowing-doing gap by transferring the knowledge gained in the study group to changes in teacher behaviour in the classroom. Study groups typically progress through the following four stages:

1. Initiation
2. Focus
3. Identifying learning resources
4. Taking action

1. Initiation

During the initiation stage participants identify the student learning need. This is usually accomplished by studying student achievement data, examining student work, and engaging teachers in discussions about the instructional needs of their students. The study group then decides on their student knowledge and skill focus after exploring a variety of student learning needs (examples: reading comprehension, writing, study skills, problem solving in math.)

2. Focus

The study group works to identify an essential question that will guide their work and study. They clearly articulate the core question they want answered about the student learning need or the instructional need. At this point group members also discuss what student data they will use to assess their work.

3. Identifying learning resources

At this stage participants discuss the various ways they can acquire new knowledge and skills in the area of their study. Participants search for and identify primary resources to help accelerate the study groups' learning. These resources usually include professional books and articles, research studies, knowledgeable colleagues and consultants, workshops, learning modules, online materials and networking opportunities.

4. Taking action

The Action-Oriented Study Group then examines or generates classroom based data around the student need or focus it is investigating. These data serve as the baseline for the intervention by the study group's members. The members then engage in study related to the student learning need in order to expand their knowledge base. Following this period of study, the members plan their intervention, implement their ideas or shifts in teaching practices, reflect on their actions and revise their approach where needed. The study group members then collect and examine post-intervention student achievement data, and compare these results to their baseline to determine the impact of implementing their new knowledge. This study group process typically extends over multiple meetings.

Study group members are advised to keep a record of their decisions and actions in order to generate school-based knowledge about the improvement process. They often share their learning and accomplishments with other learning teams and the whole school staff.