

Learning in the Field: *The Student Work Study Teachers Initiative, 2009-2010*

This report will summarize and highlight the core areas of student and teacher learning as reported by 50 Student Work Study (SWS) teachers' observations about student learning in classrooms.

The final reports submitted by the SWS teachers are rich sources of information on student learning within the context of elementary classrooms. They also highlight the power of collaborative inquiry-based professional learning located in the ongoing experiences of classrooms.

This report may help principals, school communities and those interested in professional learning and change. The report offers insights into one approach towards inquiry-based professional practice within schools.

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reach every student



Preamble

Studies of expert problem solvers in various domains indicate they devote relatively more effort than non-experts do to understanding the problem and its constraints – to figuring out what makes it a problem and what kind of problem it is – before laying into its solution (Glaser and Chi, 1988).

Bereiter, C. (2002). *Education and Mind in the Knowledge Age*, Lawrence and Associates, London, UK, pp. 348-349.

As Carl Bereiter so adeptly states in his discussion of creative thinkers, it was the time, effort and support that teachers involved in the Student Work Study Teacher Initiative took in ‘understanding the problem’ – in this case, student learning in classrooms – which created the catalyst for ‘new’ or emerging learning for these students. The outcomes and the general findings about instructional and assessment technique shared in this report do not reveal new discoveries for practitioners. However, the process by which these findings were generated and the ways teachers understood information about the reality of their classrooms provides a critical connection between the broader theoretical knowledge and how it looks/feels when individually implemented. For actively participating teachers, the process of studying their own classroom experiences with colleagues, SWS teachers, allowed them to occupy a professional space in which ‘fluency’ of understanding between their instructional moves and the students’ responses to these moves deepened.

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Summary

The Student Work Study Teachers (SWST) initiative is a Literacy and Numeracy Secretariat (LNS) program structured around a collaborative study between an experienced practitioner working in a temporary research role, a SWS teacher, and hosting classroom teachers. During the 2009-2010 school year, 50 SWS teachers from 19 district school boards across the province visited approximately 250 classrooms from kindergarten to grade 6.

This initiative focuses on capturing and understanding student activity in classroom contexts as the primary source of information used to inform immediate classroom actions and build systematic knowledge of the classroom experience for school, district and provincial organizational and strategic direction. The purposes of the SWST initiative are to learn more about the:

- characteristics of student's work at level 2 moving to level 3,
- kinds of feedback to students that results in improved work and engagement, and
- classroom conditions that support the development of student learning.

As two SWS teachers, a classroom host teacher and a student all reflect, this initiative was an exciting learning opportunity for all participants:

It (the SWST initiative) has led me to question myself and my practice. It has caused me to be more empathetic to the student experience and has allowed me to feel a sharpened sense of instructional experience. [SWS Teacher]

The grade 3 classroom teacher shared with me her thinking about the need to go deeper and give students time to really write (and) reflect(s) how she can integrate her new thinking into her math program. [SWS Teacher]

Although I had read in many professional resources on the value of working with peers, the opportunity to look closely at how this affects student learning has had a permanent effect on how I will teach for the remainder of my career. [Host Teacher]

After every assignment, the written feedback told me what I was doing well and what I needed to focus on. So I just focussed on what I needed to do and got better. [Student]

As these participants expressed, the SWST initiative challenges us to re-think what is involved in the term 'professional practice' when everyday, ongoing classroom experiences become the material for professional learning and systematic inquiry. The analysis of this initiative is structured around three interrelated areas that were essential to understanding the influence of the SWST initiative in schools and districts:

- Student Learning
- SWS Teacher-Teacher Relationships
- Professional Learning

The following conclusions of the report are organized within these four headings.

Implications about Student Learning

Students showed progress in their learning in reading, writing and mathematics when they had opportunities to participate in four general and interrelated instructional areas, as follows:

Rich Instructional Tasks

Engaging in learning that connected their experience and world view to wider experiences as a way to grow, adapt and develop learning and knowledge.

Assessment for Learning

Continually refining and improving their work and their thinking as a result of ongoing, incremental and timely assessment activities that were often co-constructed with their peers.

Accountable Talk

Expressing their ideas and thinking that built understanding and established their voice while also serving to inform lesson and teaching direction in adaptive and timely ways.

Scaffolding Guided Practice

Developing independently as a learner through a balance of whole class, small group and individual activities or tasks that created flexible and creative learning spaces for their growth.

Implications about SWS Teacher-Teacher Relations and Professional Learning within the Initiative

Given the right institutional conditions and support, collaborative practitioner research creates a dynamic environment through which deep understanding of the contextual learning conditions that foster learning for students is achieved.

The process through which the findings about student learning were generated built a critical connection between the broader theoretical knowledge that is considered as 'high yield' instruction or 'best practice' and its translation to locally and individually owned practice. Opportunities and supporting conditions (including collaborative relationships) for host teachers to inquire about their own students' actions and engagement in response to their instruction and assessment strategies built a 'critical fluency' between instructional moves/actions and student moves/actions within classroom spaces.

Challenges for Moving Forward

Identified challenges include:

- Extending the learning from the SWST initiative in order to reach more schools and teachers. What should be brought to scale – the core student learning findings articulated in this report, the process by which professional learning becomes personalized and owned by classroom teachers or both?
- Maximizing and supporting the use of existing research and theoretical knowledge as a part of the SWST initiative.
- Building and supporting time for the collaboration between SWS teachers and host teachers to meet outside of the daily teaching routine of host teachers.
- Building system leaders' capacity to understand and support collaborative inquiry processes in schools.
- Maintaining and building ministry and local expertise in field research skills needed by the SWS teachers in their study as well as to support classroom inquiry in general.

Potential Next Steps to Consider

In addressing these challenges, district school board and school leadership might consider the following approaches:

- Strengthening coherence between the SWST initiative and other professional learning opportunities (e.g., school and district school board professional activity (PA) days,

and other improvement activities like Schools in the Middle (SIM), teaching-learning critical pathways, and the Collaborative Inquiry for Learning – Mathematics), which might provide release time for the initiative while honouring the limited amount of time that teachers can take away from their students and enhancing the effectiveness of district school board/school improvement attempts.

- Increasing the involvement of system leaders in specific ways throughout the year in the SWST initiative and combining this involvement with formal, authentic inquiry of their own to deepen system understanding of the role of collaborative inquiry processes in school improvement.
- Creating continued opportunities for cross district school board work.
- Exploring potential partnerships (e.g. universities) for research and evaluation purposes and to build research capacity.
- Developing and formalizing an artefact/outline by the LNS detailing the knowledge and skills of field research to be developed and used “in situ” by the SWS teachers as well as establishing the cycle of regional sessions and study reports.

Introduction

The Student Work Study Teacher (SWST) initiative is composed of a series of discrete collaborative inquiry projects taking place across Ontario that focused on student learning and actions in response(s) to instruction in classrooms. Fifty Student Work Study (SWS) teachers in approximately 250 schools in 19 district school boards across Ontario were involved in this initiative. The initiative uses a co-learning model in which both SWS teachers and host teachers (teachers who volunteered to participate in the initiative) work together studying student responses to instruction within classrooms. The focus of the initiative is student learning and activity as opposed to teacher instructional activity. All conversation and potential actions within the study stem from what students are doing.

The initiative draws from a perspective or stance which recognizes strengths and assets of students and teachers in classrooms. The point of action and understanding for the study and all its participants is located through student strengths, developing deeper understanding of students as learners in classrooms and using this information to inform new actions/responses. All the while observing, recording and analyzing the students' responses with classroom teachers as a means to build new learning and action. These iterative phases of observation, recording, discussion and reflection led to the development of suppositions or conditional statements about students' learning, composed of two essential parts:

1. A general statement of student action (e.g., if students respond to specific oral feedback).
2. A conditional statement of student effect which happens as a result (e.g., they will show deeper understandings of classroom tasks verbally or in writing).

SWS teachers were experienced classroom practitioners that had been in either coaching/consultant roles or were classroom teachers prior to the initiative. They brought expertise evenly distributed across grade 1 to grade 6 with a smaller proportion of SWS teachers bringing expertise in Kindergarten. Although the majority of SWS teachers reported comfort with both literacy and numeracy, very few SWS teachers identified numeracy as their strongest area of comfort in their teaching.

The SWS teachers' journey began by observing specific students producing work that was assessed to be at level 2 or equivalent to a "C" grade in approximately five different schools within their district. By observing and interacting with these students in classrooms, SWS teachers and, to lesser degrees, host teachers became exposed to the students' own perspectives on their classroom learning and their work. All the while, SWS teachers sought to build strong learning relationships with these students, classroom teachers and the other students in the classrooms.

SWS teachers met for regional meetings to share and discuss their work. LNS staff provided workshops and supported expertise in two areas of the study within the ongoing regional networked meetings of SWS teachers and district school board leaders:

1. Building viable and sustainable collaborative relationships with teachers and principals that were situated from the asset stance detailed earlier.
2. Doing qualitative field research within classrooms that drew heavily from ethnographic approaches to social inquiry.

The initiative organizers and facilitators were regional Student Achievement Officers (SAO) and a LNS researcher with expertise in qualitative research in schools and classrooms. While working on a structured set of ethnographic and participant observation research skills, the regional workshops were also grounded in an adaptive developmental stance that relies heavily on the needs and expertise of the SWS teachers themselves, their roles in schools and the context of the schools involved in their specific study. The content and foci of regional sessions were shaped and adapted to the SWS teachers' emergent, ongoing needs and issues as research-practitioners throughout the spring. In June, at the end of the school year, the SWS teachers wrote a formal report shared with their teachers, schools, school districts and the LNS. This report was designed to unpack their learning. In the summer, a team of LNS SAOs and researchers analyzed and aggregated the fifty reports. This analysis serves as a major data source of evidence from which this report draws.

As detailed earlier, the principle aim of this report is to share the learning reported by the SWS teachers in their final reports in June 2010. The summer work team read and analysed the SWS teachers' reports. SWS teacher reports which form the basis of the analysis were on average over 35 pages long, with several reaching close to 100 pages. The reports represent work in approximately 1400 classrooms over roughly 17,500 hours. The qualitative analysis of these studies focused on gaining an understanding of classroom instruction from the perspectives of students as interpreted and reported by the SWS teachers. The analysis of these reports looked at common and divergent student learning themes, and SWS teacher and classroom teacher experiences and relationships. These findings are divided into three main sections:

- Student Learning
- SWS Teacher-Teacher Relationship
- Professional Learning

Although the three main themes are presented discretely for clarity and reporting purposes, they are interrelated and connected. As collaborative relationships focused on student learning between SWS teacher and the host classroom teachers deepened, the learning about the integration of students' learning in response to instructional strategies became enriched. All of which enabled a deeper understanding of the learning themes explored by the co-learners (the SWS teachers, the classroom teachers and the students). Figure 1 below is a diagram which emphasises the interrelationship of these three areas. In short, the learning of the participants in the inquiry is as important as the learning that occurred as a result or product of the inquiry process.

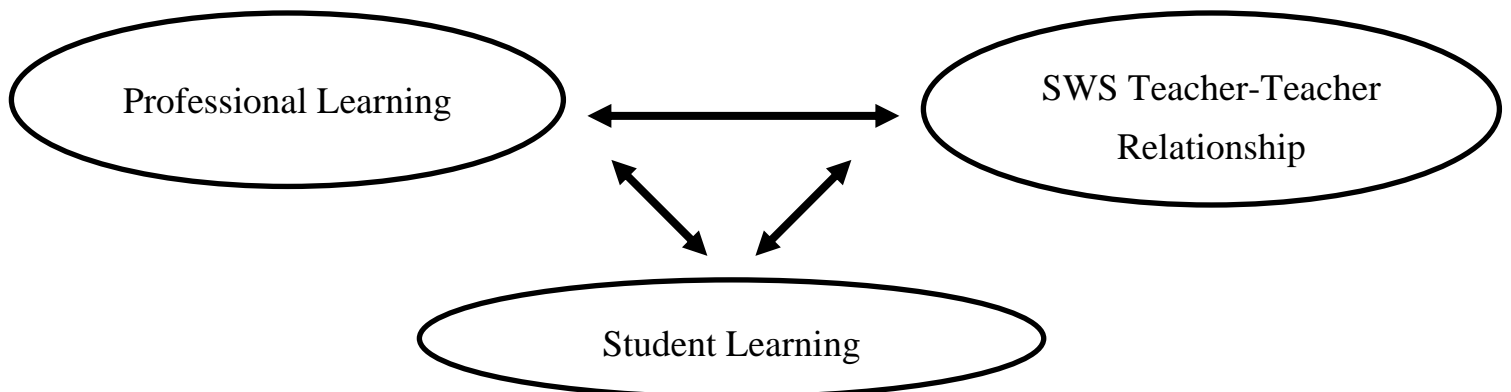


Figure 1. Organizing themes of the SWS teachers' experience

Student Learning

The SWS teachers' reports detailed observations, analysis and learning about students producing work at level 2. In this section, the main themes that emerged through the analysis of their reports are presented. The student learning themes which emerged from this analysis of the 50 studies already appear in research literature and currently exist as core areas that the LNS has been promoting across Ontario. The work of the SWS teachers, however, contributes to understanding *how* professionals construct and develop their own understandings about student learning and, critically, *how* to foster the ongoing, progressive development of student learning for different individuals in different contexts within their classrooms. Teaching and learning concepts like *assessment for learning* or *guided practice* become a part of individually and locally owned knowledge through practice, experimentation and reflection. This kind of personalized knowledge building leads to the effective and differentiated use of such strategies.

The student learning described in the reports written by the SWS teachers can be clustered into four large but interrelated areas:

1. Rich Instructional Tasks
2. Assessment for Learning
3. Accountable Talk
4. Scaffolding Guided Practice

Students showed progress in learning reading, writing and mathematics when they had opportunities to participate in these four instructional areas. Often descriptions of student learning and progress included two, three or even all four of the areas. Treating these areas as discrete or in isolation may be artificial to how they emerged within the individual studies. However, considering each area discretely helps build understanding of the role that they play in supporting student learning. What follows is a more thorough discussion of each area.

Rich Instructional Tasks

Observations of this area of student activity in classrooms connected student experiences and existing perspectives of the world to a more complex experience of the 'larger' world as a way to grow, adapt and construct knowledge. Rich instructional tasks were characterized by three areas:

- Connectedness
- Visualization
- Choice

Connectedness

Connectedness is a term used to describe a task or prompt that is relevant or has some connectedness to the student's experience, world and/or schema. When the student activity was relevant, SWS teachers reports stated that the students were 'engaged' and they were able to demonstrate their thinking and learning more successfully. Two SWS teachers, Mark and Melanie, report it this way:

When students are prompted to connect to personal experiences they are better able to explain their thinking related to the theme. The students seemed to be more successful when the events in the book were in (their) background experiences. [Mark]

When math problems are authentic, students tend to be more engaged because the math is meaningful to real life and is not simply a worksheet to fill in or a textbook page to complete filled with numbers without context. I realize that when students are given the opportunity to build their own meaning and make their own discoveries, they are more likely to develop a sense of their ability to learn. They are also more likely to develop a willingness to explore and take risks. [Melanie]

Visualization

For the purposes of this study, student visualization is the construction or recollection of a sequence of mental images from experience or imagination that create a vivid representation. This strategy was implemented in numerous classrooms and was used sometimes as a pre-writing strategy to help students think and imagine the elements involved in their writing. Other times, it was used as a post-writing activity to explain and reflect about personal writing or performance on a task. Mary and Sally, two SWS teachers, reported the impact of the strategy on students' performance in the following way:

After giving them time to visualize with my questioning, their answers showed more depth and explanation, (then) using previously taught techniques. [Mary]

Students who draw prior to writing were able to begin the writing task and refer back to their drawing to expand their ideas. [Sally]

Choice

Students were given choices within different types of tasks allowing them to have a measure of independence. Student choice took many different forms, e.g. choosing to use manipulatives in mathematics, choice of text, choice of form, choice of audience, choice of representation for thinking, and/or choice of work group (independent, partner or small group). Providing opportunities for student choice was also not always explicitly identified within the SWS teachers' report but often was embedded within other themes like self-assessment, accountable talk or feedback. One SWS teacher, Sue, describes an instance where student choice was nested in work with a graphic organizer:

When asked which graphic organizer worked best for him, the student responded that he liked using webs. He used a web to record his ideas, talking his ideas through before adding them to his web. He then referred back to the web as he formulated his paragraph. [Sue]

Assessment for Learning

Formative assessment of student work was another large umbrella under which classroom actions were frequently clustered. Assessment for learning for the purposes of this analysis refers to the continual refinement and improvement of student work and student thinking. Improvements occurred as a result of ongoing, incremental and timely assessment activities that were often co-constructed with them by teachers and students. Four interrelated sub-categories emerged from this notion:

- Self-Assessment
- Co-Creating Criteria
- Explicit Feedback
- Graphic Organizers

Self-Assessment

Student self-assessment was a recurrent theme. It was described in the SWS teacher reports as students reviewing their work while referencing a rubric or success criteria and evaluating how successful they had been in meeting the success criteria. Self-assessment could be formative or summative and could include peer assessment/feedback. This form of assessment assisted students in becoming more aware of their strengths. It helped students develop metacognition - “thinking about their thinking” and to focus on the “next steps” needed to improve their work and skills.

Some examples referenced in the reports included students re-reading their work while referencing feedback and/or success criteria to find ways to improve; students working in pairs or small groups editing each other’s work to provide feedback; and students highlighting success criteria and comparing their work to it to see how well they had met the criteria. Through one student’s description, Joey, of what he needed to do to improve his work, the influence of self assessment as a potential learning tool becomes evident:

I needed more evidence from the text in my first piece and now I know how to make sure I have evidence from the text. It helps me learn; it gives me an idea about what to write. [Joey]

Co-Creating Criteria

Co-creating criteria is a process where students and teacher(s) collaborate to identify the key components of the learning task. This collaborative activity provides an understanding of the rationale used to assess students’ work. This process helps students and teacher(s) to develop a shared understanding of the task components and provides students with a clearer idea of what is expected. The development of criteria was reported to evolve as the students’ thinking moved to a deeper level. This strategy, coupled with the students’ use of anchor charts, helped remove the “mystery” part of evaluation. Co-creation of criteria was also linked to willingness to take ownership of their learning and self-monitoring. Terry’s comment typifies the way that the SWS teachers described their observations about the influence of co-creation of criteria on learning:

Applying success criteria to written work improves student work. Written pieces include more details and demonstrate a higher quality of work. Teacher’s expectations and learning become transparent, which in turn leads to student success. [Terry]

Explicit Feedback

Feedback in the SWS teacher work was described as purposeful. Intentional suggestions were often based on success criteria or the curriculum focus for the task and were explicit enough to lead to a follow-up action on the part of the student to improve their work. In the SWS teacher reports, the impact of both oral and written feedback was emphasized. Written feedback is described as an ongoing, continuous, recurring process that responds to students’ work in ways that provide a framework for the next potential step for a student. It was described as a component of formative assessment, providing students with additional opportunities to improve their work. Some examples cited in the reports include: “two stars and a wish,” “explicit written feedback for next steps,” and “post-it note comments”. One SWS teacher reported one student’s, Ted, appreciation for the feedback he received:

After every assignment, the written feedback told me what I was doing well and what I needed to focus on. So I just focussed on what I needed to do and got better. [Ted]

Differing slightly from written feedback, oral feedback takes a slightly more spontaneous and dynamic (interactive with students in the moment) quality in classrooms. It existed as a prompt, a word of encouragement/clarification or a question that allowed the student to reflect, rethink and refine their work. Oral feedback allowed teachers to interact more regularly and more immediately with students in helping them improve their work. It often seemed to be a pre-cursor for written feedback and at other times was used solely as a formative assessment strategy for students. Several reports cited the “pair-share” strategy where students shared their work with a peer for suggestions. Some SWS teachers, as Sally does here, also linked peer discussions/feedback to risk taking:

In classes where students were able to work with others, where their thoughts and ideas are valued, students felt open to risk. [Sally]

Graphic Organizers

Graphic organizers were depicted as frameworks that helped students to organize their ideas prior to responding. The use of graphic organizers was referenced as a powerful tool in the SWS teacher reports. Some examples cited include: idea web, K-W-L chart (what I know - what I want to know - what I learned), components of a narrative organizer, four squares, components of non-fiction writing, and UPCL in mathematics (Understand, Plan, Carry out the plan, and Look back/review). Two SWS teachers, Teresa and Sue, and a student, Jamie, shared their thoughts on the impact of the use of a framework to organize ideas in the following kinds of ways:

When students generated ideas using a web or idea circle, they sorted and chose (the) three most important ideas/reasons and then were able to continue on to complete a thinking organizer. [Teresa]

I have determined that graphic organizers and drawings, completed as pre-writing activities, are often potent exercises for the learner. [Sue]

Graphic organizers help me to see what my ideas are but in different words. [Jaime]

Accountable Talk

“Accountable talk” in classrooms was considered a part of the classroom activities when students engaged in directed, on-task conversation in pairs, small groups or whole class discussions. This activity provided an opportunity for students to share their ideas and thinking with others, co-construct their learning and build on their understanding of the task. This interactive process allowed students to extend their understanding of the situation and task. The importance of allowing opportunities for students to orally express their ideas and thinking was noted in many SWS teacher reports. Student-driven discussions helped build and establish student voice while it also served to inform lessons as well as adaptive and timely teaching. This strategy was referenced frequently in the reports and identified as a potential effective strategy as discussed by Nicola and Sam, two SWS teachers:

We lead them in having purposeful conversations about the relevant big ideas. This conversation helped them inductively discover the rules, rather than just accept them. [Nicola]

In working with students, accountable talk prior to a student completing a writing task appears to help them generate and expand their ideas. [Sam]

Four different approaches to accountable talk in classrooms were discussed:

- Oral Rehearsal
- Time to Think
- Questions, Prompts and Statements
- Rewording Questions

Oral Rehearsal

This strategy provided students with an opportunity to practise articulating their thinking in advance of the final product. This interactive process scaffolded learning by allowing the student the opportunity for feedback. It also assisted them in deepening their understanding and supported the refinement of their thinking before the culminating activity. This strategy was especially powerful for students who were stressed or did not have much confidence in their abilities, as one SWS teacher, Michelle, and two students, Marc and Dianne, stated:

Having students verbalize instructions, questions or ideas from visual charts around the room out loud was all the clarification needed to assist them in moving forward. Practising orally together provides a safe environment for students to try things out with a teacher or peer. [Michelle]

I'm a bit nervous so I am going to keep practising. I want to do a good job. Can I show you? Can we try again? [Marc]

When given the opportunity to re-read his work aloud, he was able to identify errors. [Dianne]

Time to Think

Time to think refers to planned and intentional opportunities for students to consolidate their thinking and understanding. This was mentioned as an important way for students producing work at Level 2 to frame their thinking before communicating their understanding. As Suzanne details in her study, this strategy was also used to let students think and learn about the subject matter in an inductive manner:

They could easily come up with the “rules” because they had carried out the activity with the manipulatives and had made discoveries and conclusion based on their doing. [Suzanne]

Questions, Prompts and Statements

The use of questions and prompts is a technique that scaffolds students' understanding and supports their thinking. It was often used to support students' reflection and consolidation in order to deepen their understanding. Cuing, visual prompts, and questioning were some examples referenced in the summaries. This strategy was cited frequently throughout the

reports and was also one of the most important ways that the SWS teachers interacted with students in lessons.

Rewording of Questions

Rewording questions is a technique that scaffolds learning for students and contextualizes information for students at the point of need. This strategy could be considered differentiated instruction “in the moment” through supporting students gaining a firm grasp of the task or prompt. It provided a different way for students to deepen their understanding of the task. Most times this strategy was reported as highly contextual and interactive in a one-to-one setting (student with SWS teacher). As Mark details, the importance of verbal questioning and the use of different ways to explain questions was reported as key for student learning, engagement and progression:

In order for students to develop their capacity for high-order, critical thinking, students need frequent opportunities to ask and answer questions, participate in discussions and classify information. [Mark]

Scaffolding Guided Practice

The fourth area of student learning discussed across the 50 reports fell into process or instructional moves which allowed students opportunities to gain independence as learners. Here, students progressed towards independence through a balance of whole class, small group and individual activities or tasks that created flexible and creative learning spaces for their growth. This area of learning was discussed in three different kinds of ways throughout the reports:

- Guided Practice
- Modelling
- Independent Practice

Guided Practice

The main feature within guided practice was reported as an opportunity for students to practice with direction, coaching and support, most often provided by the classroom teacher and/or SWS teacher to ensure that they have a full understanding of the task before they worked independently. SWS teachers found that this technique scaffolded instruction and provided appropriate amounts of support to students based on their individual needs. After this happened, SWS teachers observed students participating more effectively in whole group sessions. As Loraine and Collette detail, this strategy is often nested in other areas of instruction and learning. It is a way that teachers interact with students to personalize learning and create appropriate challenges.

By focussing on next steps with the students and orally discussing how to use them when refining their work, students are able to improve significantly. [Lorraine]

Students were provided with a desk copy of success criteria and a highlighter to concentrate on criteria that the student felt was important. [Collette]

Through guided practice SWS teachers reported the importance of being precise, responsive and intentional with student voice and actions. In many instances, SWS teachers reported that classroom teachers included strategies for guided practice into their daily instruction after seeing the effectiveness of guided practice with the students and SWS teachers.

Modelling

Modelling is an instructional technique that was integrated into many different aspects of teaching. As two SWS teachers, Joe and Sue Ellen, detail modelling can take a diverse array of forms throughout an instructional moment:

After ... I modelled brainstorming and wrote down their ideas, the students seemed comfortable with generating their speeches. [Joe]

These skills were modelled through the use of open-ended questions and active listening in group sessions as a strategy to facilitate conversation and talk. [Sue Ellen]

Here, teachers explicitly demonstrated a process for students. Reports indicated that this often assisted students in building their own understanding.

Independent Practice

Independent practice for students occurred after SWS teachers had modelled and coached students. Optimally, independent practice supports students acquiring skills while taking ownership for their learning. Michelle discusses the relationship between student inquiry and independence, while Toni discusses the role of confidence and efficacy in students' ability to work independently:

The inquiry allows for students to construct their own knowledge of a form of writing while the gradual release allows them to try a form of writing, moving from maximum support through to independence. [Michelle]

As she got each one correct, and could justify her choices to me, I could see her confidence growing because she had less hesitation, asked me fewer questions and was increasingly excited about her work. [Toni]

As the discussion on student learning and progression comes to an end, it is critical to note the interconnectedness of the discrete areas of student learning and instruction discussed. Multiple areas of student learning and teacher instruction often co-existed within any given learning moment. Equally, the inquiry process – the ongoing collaborative work that focused on capturing student learning in 'situ' in the immediate experiences of students within classrooms just described in the last section – proved to be a powerful professional learning experience for both the SWS teachers and the classroom teachers. It is essential that the initiative be understood for both the *product*, insights in student learning and instruction, and the *processes*, in depth collaborative inquiry that used ethnographic and participant observation research techniques to promote and capture student learning experiences in classrooms. It was through the SWS teachers' and classroom teachers' engagement in solving the 'problem' of student learning which provided rich, personalized insights into the ways students respond to instruction and the ways instruction responds to students.

It seems that the depth of understanding about student learning described by SWS teachers was dependent on the degree to which the dialogue and relationship between the SWS teacher and classroom teacher was honest, critical, trusting and collaborative. These studies were very contextual – specific and detailed to singular student-teacher inquiry based experiences within classrooms. The aggregate value or meanings made about student

learning holistically cannot supersede or marginalize the power that this work had as a singular learning experience for participants and organizations involved. The next few sections will discuss the process of the inquiry itself by first looking at the relationships between classroom teachers and SWS teachers and then finishing with a discussion of the initiative as a professional learning experience.

SWS Teacher-Teacher Relationship

As a SWS teacher, entering classrooms and schools required time, flexibility and adaptation in order to establish roles and processes within the collaborative inquiry. The SWS teacher role is essentially an 'insider/outsider' role in which SWS teachers reported feeling at times separate from the school and, at other times, as a part of the working membership or community. The diverse and flexible nature of this role is evident in the following comments made by two different SWS teachers, Mary and Jane:

(The) classroom teacher was active in supporting classroom conditions relevant to (the) supposition. (The) teacher actively collaborated on creating activities, topics, lessons, conducive to (the) supposition. (We) shared observations, co-constructed knowledge based on observations and work samples, and co-planned next steps. (The) teacher created many opportunities for students to create, use and display, anchor charts during the course of the school day. (She) also expressed (the) wish to have all students in the classroom, students identified as having special needs, also be involved in the supposition. [Mary]

... two classroom teachers I was working with were each at a different place along the continuum in terms of their understanding of the problem-solving process in math. As a result, the work I did in the primary classroom was more of a co-learning partnership while the relationship with the junior teacher was more information sharing. Throughout my time in these classrooms, I shared with the teachers the observations and interactions I had with students on a regular basis. The teachers used this information to inform their instruction, and also shared their observations and reflections with (me). [Jane]

Mary discusses an experience in which the teacher was actively co-constructing meaning within her study to inform her potential actions in the classroom for all her students. In this instance, Mary's relationship with the classroom teacher helped to deepen the teacher's own understanding of her practice and actions in relation to the work Mary is doing with some of her students. Jane, on the other hand, seemed to be working in two different kinds of relationships with teachers. One seemed to fit into what Mary is describing while the other placed Jane as an outsider, providing some information but not actively co-constructing the potential new meanings that may emerge as a result of the collaboration.

Collectively these excerpts help define what 'insider/outsider' roles with teachers look like in the SWST initiative. Insider roles with teachers were ones in which the SWS teacher acted/felt like a member within the learning community, actively participating in the classroom. While as an 'outsider', the SWS teacher is a source of potential information that the teacher may or may not use in their ongoing work. They are not necessarily included to be a member, co-constructing meaning within the experience of the classroom.

The SWS teachers generally took on both of these roles within their work in schools. At times, they moved from outsider to insider and at other times they did not. Often movement to a role as co-learner and insider emerged from the work with students. As the SWS teachers built positive learning relationships with students, which generated new understanding and more sophisticated work from students, the classroom teachers became more engaged in the study itself and the potential meanings that were emerging from it. When this occurred it often served as a critical moment for many SWS teachers for their study's findings about students, discussed in the last section, and for the relationships they were establishing with

teachers. The following two excerpts from Julie and Tom highlight the importance of generating new learning for students within the initiative:

I have witnessed the power of using student work to drive the decisions that we make in our classroom practice. It was fascinating to watch teacher efficacy improve as students meet success with their learning as a result of their teaching. [Julie]

That focused observation of student and really understand the varied ways that students try to tell and show us that they need help and they really want to be successful if you could just listen and show them strategies they can use to be more successful...slow down and listen and observe. [Tom]

Although not directly related to the dynamic growth of co-learning relationships in classrooms between SWS teachers and classroom teachers, the emphasis on watching students and creating new learning opportunities for students was central to the growth and depth of the co-learning relationships that often did occur across the initiative. As opportunities and experiences occurred in which students grew as learners, the co-learning relationships between SWS teachers and classroom teachers also grew. To get a better sense of this relationship between the SWS teacher and the classroom teacher, a closer look at the ways in which the teacher and the SWS teacher communicated is helpful.

Communication and Interactions Between SWS Teacher and Classroom Teacher

Communication between the classroom teachers and the SWS teachers took a great variety of forms. Most dialogue between SWS teachers and classroom teachers involved some form of sharing of observations and notes about their interactions with students. This frequently took the form of an informal, “on the fly” discussion during the daily routine of the school day. Less frequently but far more effective in developing the co-learning relationships were the opportunities outside of the daily, busy teaching routine where SWS teachers and classroom teachers met formally to thoroughly discuss elements of the study and participate as colleagues in the inquiry. One SWS teacher, Robyn, touches on the range of SWS teacher-classroom teacher interactions in the following way:

Information was shared with the classroom teacher when interesting observations emerged, often during transition times or recess; (I) met (with teachers) during planning times, lunch hours and after school to complete moderation. [Robyn]

As detailed earlier, the depth of collaboration and frequency in which these different ways off interacting occurred with classroom teachers varied. Drawing from a survey of the SWS teachers, approximately 80% of SWS teacher classroom visits included a ‘quick’ discussion between the SWS teacher and classroom teacher of what happened and what was observed by the SWS teacher working with students. However, far fewer numbers of classroom teachers (about 25%) were engaged in deeper co-learning relationships discussed earlier. Equally, SWS teachers reported even fewer opportunities for this relationship to grow outside of classroom hours through release time. About 60% of SWS teachers reported that they were able to set up release time for teachers ‘only a few’ times or ‘almost never’. Yet, close to 90% of the SWS teachers indicated that providing release time for their work with classroom teachers was either ‘important’ or ‘very important’ to the success of the initiative.

This marks a discrepancy between what might be the ideal conditions for this initiative to generate deeper co-learning between SWS teachers and classroom teachers within schools

and the constraints of very busy, demanding schedules. Critical to this discussion are the ways in which district school boards and schools may be able support this kind of intensive interaction by potentially coupling this initiative with other larger school and district school board improvement strategies, PA days and general release time used to engage teachers in a variety of professional learning experiences.

Regardless, the SWS teachers reported a variety of specific ways that they interacted with teachers. These ways helped define their roles in classrooms and schools. Generally, these ways of communicating and interacting with teachers fell into one of five interrelated categories: reporting, co-learning, co-planning, co-teaching and coaching. The roles were not static but dynamic and evolved as the study developed. They also may have been influenced or partly shaped by the culture of the school and the context of the classroom. What follows is a brief description of these kinds of roles in communication and knowledge creation, and what they looked like.

- *Reporting* - a general sharing of information usually from SWS teacher to classroom teacher about the ongoing study and specifically what occurred in the teachers' classroom on the day the SWS teacher visited. This was the most common way the SWS teacher interacted with classroom teachers.
- *Co-learning* - in these kinds of interactions, the classroom teacher and the SWS teacher shared the analysis of student work samples and observations regarding student learning to learn together about the student work and/or to determine next steps for individual students and groups of students.
- *Co-planning* - often followed co-learning when both teachers co-constructed understanding and meanings from the evidence and observations of student actions. Together, the SWS teacher and classroom teacher decided on what strategies they would use and which success criteria would best determine task attainment.
- *Co-teaching* - was defined as both the SWS teacher and the classroom teacher share class instruction. This includes instances when one takes the lead for some activities while the other provides support, or when they each lead some of the activities or when each instruct part of the class. This kind of role between the teacher and SWS teacher occurred at the deepest levels of collaboration when the classroom teachers were intricately involved in the study's methods, data collection and analysis. In these instances, the co-learning/co-teaching role moved into a realm best defined as co-owning the study itself. In some instances, when the SWS teachers were teaching, the classroom teachers became the primary researchers, observing and collecting data about the students in response to the instructional techniques.

All of these ways of working with teachers led to professional learning about the ways that students respond and engage in classrooms for SWS teachers, classroom teachers and, even at times, teachers outside of the study. As such, the initiative was an effective approach to professional learning in general and specifically showed great promise in providing teachers critical opportunities to integrate their understanding of students' actions with their instructional approaches. One participating classroom teacher described the increased integration of their instruction with their students' actions as 'becoming fluent' in the connections between their instructional moves/actions and the subsequent student moves/actions.

Professional Learning

Description of Professional Learning of All Participants in SWST

This initiative builds on a model of professional learning that envisions teachers' learning as an active process of knowledge construction through problem based situations anchored in classroom settings. As such, the SWST initiative is an example of an 'asset' model of professional learning. The adult practice is not positioned as the subject of the initiative to be 'fixed' or modified, rather student learning sits at the centre of all actions and practice. In so doing, teacher professional practice becomes more precise, responsive and sophisticated, and understanding about student learning and improvement deepens and progresses. As this occurs, professional learning or the ongoing progressive processes by which pedagogic technique is connected – curricular, instructional and assessment – to student learning and improvement also progresses. It was through systematically capturing the processes, as they related to the targeted students in the study, that created the common areas of student learning across the study that was discussed earlier.

The professional learning embedded in the initiative stemmed from the interactive work of the SWS teachers, the teachers and the students as they engaged in a systematic study of learning and actions within classrooms. As the learning experiences for students unfolded, the learning of all participants deepened. SWS teachers engaged in an inquiry of student actions and responses within a variety of teaching contexts. The classroom teachers participated in an inquiry of their own students' responses to their instruction and the classroom conditions. The students were supported to attempt potentially different approaches to problems or to articulate their own learning in systematic ways. Collectively, the learning throughout these inquiry processes were powerful, student focused and pedagogically oriented. As SWS teachers, Larry, Colleen and Sarah, reflect:

I now realize that anchor charts are “working documents”. They need to be revised and changed as our learning evolves. This is a new insight I have gained and I can appreciate that learning and knowledge should not be stagnant, but continuously evolving. [Larry]

One thing I want to keep in the forefront of my mind as I begin next September is the length of time it takes to build this success. We've always hear(d) the phrase “kids need time to write” and while I've always thought I was giving them time enough, I think my focus on the process of their writing this year, rather than their final product, has produced improvement in their final products. [Colleen]

Although I had read in many professional resources on the value of working with peers, the opportunity to look closely at how this affects student learning has had a permanent effect on how I will teach for the remainder of my career. [Sarah]

For SWS teachers and classroom teachers, the initiative built personal understanding about the challenges of students working at level 2 and potential strategies that were more likely to work for them. This occurred through opportunities for teachers to observe students, assemble evidence and data from students' performances in context, and discuss the potential meanings of these observations. This, in turn, helped classroom teachers involve to reconceptualise the nature of learning for students, as well as reflect on their own teaching practices through the lens of their students' actions and engagement. In these ways, the

initiative fostered communication between two or more professionals about genuine challenges faced by their students in the context of the classrooms. The co-learning model promoted a co-construction of knowledge and understanding about students' learning. The research/inquiry process itself triggered participants to review, reflect and discuss their student's learning, which often led them to reflect on their own role in enabling student learning.

Knowledge Building Resulting from Professional Learning within the SWST Initiative

In addition to the classroom interaction and collaboration, there were also regional network opportunities for SWS teachers. These bi-monthly meetings were facilitated by the regional LNS teams with expert guidance from the LNS Research, Evaluation and Data Management Team. The SWS teachers met occasionally as a group with LNS centrally based SAOs and a LNS researcher to discuss their study and address ongoing issues or questions that they had as research-practitioners. In the four regions (Barrie, London East/West, Ottawa and Toronto), the Field Team Leaders coordinated the regional meetings with the LNS research staff.

The nature of research and ensuing knowledge building is usually a slow and iterative process. But it does not happen in vacuum – devoid of context and personal ownership – and it requires interaction, communication and consolidation with peers facing similar challenges. This was the role of the regional networked sessions. These regional sessions focussed on providing training and support to SWS teachers. The sessions were designed to enhance SWS teachers' ability and knowledge in order to work as research-practitioners and focused on skill building through sharing research findings, data collection and experiences. The sessions also explored the emergent nature of the SWS teacher role in schools and its potential as a catalyst for professional learning. For example, in these sessions, the SWS teachers discussed how they collaborated with other teachers (not hosting the study in their classrooms), school principals and district school board educators. Some SWS teachers also reported that they played an active role in school's professional learning communities (PLCs) and regional network meetings. These sessions also built capacity of school and district leadership to support and use the initiative strategically in order to leverage the depth of the learning process for schools and teachers.

Innovation in Professional Learning

This initiative is an example of authentic learning happening in the workplace. As teachers often define for their students the notion of learning as an active process of sense-making, participants of this initiative may need to also consider their own understandings of professional learning for teachers. Instead of conceptualizing professional learning as a series of sessions designed to disseminate and deliver instructional and assessment techniques, effective professional learning serves to actively integrate new understanding and knowledge into existing, personal understanding and appreciation of professional practice; thus serving to broaden what Carl Bereiter calls the 'problem space' for teachers. In this initiative, the classroom is re-conceptualized as a problem space focused on increasing student learning and achievement (Bereiter, 2002). Here, it is not the amount of theoretical knowledge, best practices or high yield strategies that need to be conveyed to teachers, but the processes in which teachers develop and apply their emerging understandings of instruction and assessment to their students' responses and actions within their classrooms in iterative, ongoing and progressive ways.

Conclusion

This is a beginning to learn about the potential of collaborative practitioner research as a tool to better understand conditions that foster learning for students through a systematic inquiry of student voice and actions in classrooms. The development of hands-on and practical understanding about how specific students interact and learn in the classroom can inform teaching practices of participants and enhance student learning.

The outcomes in terms of general findings about instructional and assessment technique do not reveal new discoveries for practitioners; however, the process by which these findings were generated and the ways teachers encode information about the reality of the classrooms provides a critical connection between the broader theoretical knowledge and how it looks/feels when individually implemented. For actively participating classroom host teachers, the process of studying their own classroom experiences with colleagues allowed them to occupy a professional space in which 'fluency' of understanding between their instructional moves and the students' responses to these moves deepened and became more precise and intentional.

The initiative created an environment in which 'new' instructional techniques for participants were integrated with existing, prior or tacit understanding of work as a practitioner. As and when this occurred, the professional learning of participants was profound. In relation to understanding professional knowledge as a dynamic process that expands through practice, reflection, inquiry and collaboration, the SWST initiative may, along with other initiatives in Ontario like it, be establishing new ground from which teacher professional learning can be re-conceptualized and focused.

As influential as the SWST initiative has been for many district school boards and schools, there remain core areas or questions which need attention in moving forward. An area that was not developed in 2010 was the connection between the knowledge generated from individual studies of the SWS teachers and existing theoretical knowledge that could inform the inquiry processes through examination and connection to existing theory, knowledge and empirical evidence. Here the connection between local inquiry and wider bodies of knowledge could serve to deepen the understanding in the study as well as help develop further local examples of connecting research to practice and practice to research.

Another critical area for potential further growth is the opportunities and conditions that support host teacher collaboration with the SWS teachers. Getting opportunities for SWS teachers to collaborate with host classroom teachers proved challenging given the daily demands of classroom teachers. Developing local strategies for furthering opportunities for teachers to meet outside of daily routines would benefit the initiative and the professional learning generated as a result. Perhaps using the SWS teacher inquiry processes as a component of other initiatives or school improvement strategies in which schools and district school boards are involved would allow space and structures in which teachers could be released less frequently but for more targeted purposes. Equally, the learning generated by the intensive work in classrooms of the SWS teachers and the host classroom teachers could inform the core areas on which schools are focusing in their improvement plans. This may be a central tenant of the idea of building coherence which may be important to the sustainability of this initiative's contributions. Regardless, the use of the SWS teacher initiative has proven to infuse vitality into schools and district school boards through the deep and rich connection to the learning of students.