

Learning Connections Phase Two Report

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Executive Summary

Learning Connections is an online professional development community project modeled on and supported by the Advanced Broadband Enabled Learning (ABEL) Program at York University and funded by the Ontario Literacy and Numeracy Secretariat. Its focus is on the improvement of student achievement in literacy and numeracy in the Junior Division through job-embedded professional learning. The community participants include directors, supervisory officers, principals, district literacy and numeracy trainers, lead numeracy and literacy teachers, teachers, and information technology managers from nine school districts (six Anglophone, three Francophone) across the province. The intent of Learning Connections is to build capacity within the participating districts and schools to further student learning and achievement and to support the participants as they implement the Ministry of Education's Foundations program to advance literacy and numeracy.

The project is structured in three phases: Phase One – project initiation in winter 2005 to the Summer Institute, July 2005; Phase Two – the 2005-2006 school year; and Phase Three – Summer Institute, July 2006 and the 2006-2007 school year. This report together with the *Learning Connections Interim Report: Baseline and Fall Startup* (February 20, 2006) provide a description of Phase Two of the project. The focus of this report is on Phase Two project implementation, classroom observations, participants' perceptions of Learning Connections, and a description and analysis of online activities from January to June 2006.

Implementation of Learning Connections began rather tenuously in the fall of 2005 due largely to misunderstandings between York University project management and the Secretariat representatives on two major issues. First, project management was reluctant to make commitments to hire staff to facilitate the online community as there was no signed contract in place with the Secretariat for funding the project. The Secretariat, for their part, believed that indeed sufficient funding had been given to the project already for it to proceed. This issue was not resolved until late January 2006 when a contract was signed. At that point the project proceeded to hire online facilitators, including a Francophone facilitator. The second area of misunderstanding concerned the Secretariat's role in providing content for the project. The project proposal, which was attached to the signed contract, appeared to assign some responsibility for providing content for the online community to the Secretariat. The Secretariat did not see this as part of their role and said that they could function mainly as a critical friend to the project. Project management realized after several months that the Secretariat was not going to assist with the content, so they proceeded to develop it on their own. The net result of these misunderstandings was a lack of resources and activities in which the community could engage, and it was not until well into late fall 2005 that the project began to develop a roster of activities for teachers. Up until then teacher participation was quite low and the efforts to engage teachers more with new activities in 2006 were only partially successful.

In April and May 2006 the research team visited all participating schools to observe the teaching of literacy and numeracy. The purpose of these visits was to provide baseline data which, when analyzed together with data gathered through return visits at the same time next year, will permit an assessment of teacher growth resulting from the project. Areas where numeracy teachers were already strong included: their conceptions of mathematics; building student confidence; and

employing new pedagogical ideas such as use of open tasks, emphasizing discovery, having students work together to explore ideas, and doing ongoing assessment in a variety of ways. They are less comfortable with using a variety of tools (and allowing students to choose their own tool), making connections to other strands of mathematics, and having students look at different representations of mathematical concepts. On the other hand, literacy teachers were strong in using a variety of literacy modes; making cross-curricular links, emphasizing process in literacy instruction; and encouraging individual identity and voice in the classroom. Areas needing attention for literacy teaching included: accommodating students who need specific help; incorporating gender-sensitive practices; using media and technology in the classroom; promoting peer interaction; and use of appropriate assessment techniques.

The teachers we observed were asked about their perceptions of Learning Connections. Over one third of the teachers said that they liked the idea of an online professional community, valued being part of it, and wanted to continue being involved. Some commented on specific aspects that they liked such as the shared reading program, the resources, and the webcasts. Less favourably viewed was the lack of clarity in expectations and direction of the project, especially at the beginning. Supervisory officers who were the board contacts for the project were surveyed on their perceptions as well. Although the response rate for the survey was low, those that did respond indicated a good overall awareness of and support for the project. They supported the project's goals saying that they fit fairly well with their district's priorities, although they stressed the need to integrate it better into their local plans.

During the second half of Phase Two improvements were made to the functionality of the online portal and the number of professional activities and resources increased. Webcasts were held on topics such as developing an understanding of place value in mathematics and on literacy for boys. Two Anglophone and five Francophone videoconferences were held on various topics. Some activity was noted in the online forum where participants have an opportunity to post commentary on any of these activities or on any other topic that interests them, although overall participation was weak.

The project to date offers several lessons which may inform other similar initiatives in the future. Projects as complex as Learning Connections require considerably more time to plan than is generally acknowledged, and considerable effort has to be made to ensure that projects have sufficient "buy in" from boards and that the projects integrate with board plans. Finally, it would be more effective to start off with a simple and straightforward online portal and add features as demand warrants.

The report concludes with the following recommendations:

Recommendation 1: In collaboration with boards, facilitate information sessions for new participants in Phase Three.

Recommendation 2: Assist schools in initiating school-to-school projects.

Recommendation 3: Maintain an ongoing dialogue with supervisory officers and principals.

Recommendation 4: Plan Phase Three to meet teacher needs identified in this report.

Recommendation 5: Continue to improve the project portal by simplifying access to key material.

Recommendation 6. The Literacy and Numeracy Secretariat should consider supporting the project an additional year beyond Phase Three so that the investment in resources made thus far can potentially have a greater impact on literacy and numeracy teaching.

Sommaire executive

Le projet Liens d'apprentissage est une initiative de perfectionnement professionnel communautaire en ligne, qui s'inspire du programme Advanced Broadband Enabled Learning (ABEL) à l'Université York et bénéficie de son soutien. Le projet Liens d'apprentissage, qui est financé par le Secrétariat de la littératie et de la numératie de l'Ontario, est centré sur l'amélioration des compétences des élèves du cycle moyen en littéracie et en numéracie, et ce, par le perfectionnement professionnel de la communauté sur le lieu de travail. Cette communauté comprend les directions, les agents de supervision et les responsables des technologies de l'information de neuf conseils scolaires (six conseils anglophones et trois francophones) de la province, de même que les formateurs et leaders pédagogiques en littéracie et en numéracie de district, les directions d'école et les enseignants. Le projet a pour objectif de renforcer les capacités des conseils scolaires et des écoles participantes afin de favoriser l'apprentissage et la réussite des élèves et d'offrir aux participants le soutien nécessaire à la mise en œuvre du programme Piliers de l'éducation du ministère de l'Éducation, centré sur la littératie et la numératie.

Le projet se compose de trois phases: la phase un, qui a débuté par le lancement du projet en hiver 2005 et s'est poursuivie jusqu'en juillet 2005, avec la tenue d'un Institut d'été; la phase deux, qui s'est déroulée durant l'année scolaire 2005-2006; et enfin, la phase trois, qui a commencé en juillet 2006 avec l'Institut d'été et se poursuivra tout au long de l'année scolaire 2006-2007. Le rapport intérimaire *Learning Connections Interim Report: Baseline and Fall Startup* (20 février 2006) et le présent rapport décrivent la phase deux du projet. Ce rapport met l'accent sur la mise en œuvre du projet, les observations en salles de classe, la façon dont les participants perçoivent le projet, et offre également une description et une analyse des activités en ligne menées de janvier à juin 2006.

La mise sur pied de Liens d'apprentissage a commencé à l'automne 2005 de façon mal assurée, en raison surtout de malentendus entre la direction de la gestion du projet de l'Université York et les représentants du Secrétariat, concernant deux questions importantes. Tout d'abord, la direction de la gestion du projet hésitait à entamer une procédure d'embauche de personnel pour administrer la communauté d'apprentissage en ligne, n'ayant jusque-là signé aucun contrat avec le Secrétariat quant au financement du projet. Le Secrétariat, pour sa part, était d'avis que suffisamment de fonds avaient déjà été alloués au projet pour lui permettre de démarrer. Il a fallu attendre la fin janvier 2006 pour voir cette question résolue, au moment de la signature d'un contrat. À ce stade, des facilitateurs en ligne ont été engagés, y compris un facilitateur francophone. La question du rôle du Secrétariat quant au contenu du projet posait aussi un problème, la proposition du projet, jointe au contrat signé, semblant conférer une certaine responsabilité au Secrétariat quant à ce contenu. Pour sa part, le Secrétariat estimait que ce n'était pas là son rôle, celui-ci se résumant principalement à celui de critique. Ayant réalisé, au bout de plusieurs mois, que le Secrétariat n'allait pas offrir son appui quant au contenu, la direction du projet a donc décidé de s'en occuper seule. Du fait de ces deux malentendus, il s'en est suivi un manque de ressources et d'activités à offrir à la communauté enseignante, et il faudra attendre la fin de l'automne 2005 pour que de telles activités soient enfin créées. Jusqu'alors, la participation des enseignants avait été minime et les efforts déployés pour les inciter à participer aux nouvelles activités de 2006 n'ont été que partiellement fructueux.

En avril et en mai 2006, l'équipe de recherche a rendu visite à toutes les écoles participantes afin d'y observer l'enseignement de la littératie et de la numératie. Ces visites s'inscrivaient dans le cadre de l'évaluation du niveau de développement professionnel des enseignants participants, qui se fera à partir de l'analyse comparative des données de base obtenues en 2006 et de celles qui seront collectées l'an prochain à la même époque. À partir de ces visites, on a déjà pu observer certains points forts chez les enseignants de numératie: leur conception des mathématiques; l'instauration de la confiance chez les élèves; et le recours à de nouvelles idées pédagogiques telles que les activités ouvertes, l'accent mis sur la découverte, le travail en équipe en vue d'explorer des idées et l'évaluation continue sous diverses formes. Les enseignants ne semblaient pas aussi à l'aise pour utiliser certains outils (et permettre aux élèves d'utiliser les outils de leur choix), pour faire le lien avec d'autres domaines des mathématiques et pour montrer aux élèves diverses représentations des concepts mathématiques. En ce qui concerne les enseignants en littératie, ils utilisaient efficacement divers modes de littératie, les liens d'apprentissage jumelé, l'accent mis sur les procédés d'instruction en littératie, et la promotion de l'identité personnelle et de la voix de chacun dans la classe. Il faudra porter une attention particulière à certains aspects de l'enseignement de la littératie: aide des élèves ayant des besoins précis; intégration de pratiques prenant en compte les différences entre les sexes; utilisation des médias et de la technologie en salle de classe; encouragement de l'interaction des pairs; et utilisation de techniques d'évaluation appropriées.

Lorsque les enseignants ont été interrogés sur la façon dont ils percevaient le projet Liens d'apprentissage, plus d'un tiers d'entre eux ont affirmé qu'ils aimaient le concept d'une communauté de perfectionnement professionnel en ligne, qu'ils étaient heureux d'en faire partie et qu'ils voudraient continuer à y participer. Certains ont donné leur avis sur des aspects précis qu'ils appréciaient tels le programme de lecture partagé, les ressources et les télédiffusions sur le web. Par contre, ils ont moins apprécié le manque de précision concernant les attentes et l'orientation du projet, surtout au départ. Les agents de supervision agissant en tant que personnes-ressources de leur conseil ont pu, eux aussi, se prononcer au sujet du projet.. Les rares personnes à l'avoir fait ont indiqué qu'elles étaient bien au courant du projet dans l'ensemble et qu'elles le soutenaient. Elles approuvaient ses objectifs, disant que ceux-ci cadraient bien avec les priorités que leur conseil scolaire s'était fixées. Elles ont toutefois souligné la nécessité de mieux intégrer le projet à leurs propres plans.

Au cours de la deuxième moitié de la phase deux, le portail en ligne a été amélioré, de façon à être plus fonctionnel, et à offrir davantage d'activités et de ressources professionnelles. On a aussi organisé la transmission de télédiffusions, notamment sur le développement et la compréhension de la valeur de place dans le domaine des mathématiques et sur la littératie chez les garçons. Deux vidéoconférences en anglais et cinq en français ont été tenues sur des sujets variés. Enfin, on a pu observer une certaine participation au forum en ligne, où les participants peuvent afficher leurs commentaires sur toute activité ou tout sujet qui les intéresse, mais cette participation est restée généralement faible.

Jusqu'à présent, le projet a permis de tirer plusieurs leçons susceptibles d'éclairer d'autres initiatives. Pour des projets aussi complexes que Liens d'apprentissage, il faut allouer bien plus de temps à la planification proprement dite qu'il n'a initialement été prévu pour ce projet. Il faut aussi y consacrer considérablement plus d'efforts si on veut que les conseils scolaires rallient

plus d'enseignants au projet et intègrent celui-ci à leurs plans. Enfin, il serait plus efficace de commencer par un portail en ligne qui soit simple et convivial, puis de lui attribuer de nouvelles caractéristiques à mesure des besoins.

Voici les diverses recommandations qui concluent le rapport:

Recommandation 1: Faciliter les séances informatives destinées aux nouveaux participants, en collaboration avec les conseils scolaires.

Recommandation 2: Aider les écoles à initier des projets qui seront menés en collaboration avec d'autres écoles.

Recommandation 3: Dialoguer régulièrement avec les agents de supervision et les directions d'école.

Recommandation 4: Planifier la phase trois afin de satisfaire aux besoins des enseignants qui ont été repérés dans ce rapport.

Recommandation 5: Continuer à améliorer le portail du projet en y simplifiant l'accès aux matériaux clés.

Recommandation 6: Le Secrétariat de la littératie et de la numératie doit envisager d'offrir son appui au projet pendant une durée d'un an après que la phase trois sera terminée, afin que l'investissement placé dans les ressources créées jusque-là ait davantage de chance d'améliorer l'enseignement de la littératie et de la numératie.

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1. Introduction

Learning Connections is an online professional development community project modeled on and supported by the Advanced Broadband Enabled Learning (ABEL) Program at York University and funded by the Ontario Literacy and Numeracy Secretariat. Its focus is on the improvement of student achievement in literacy and numeracy in the Junior Division (grades 4 to 6) through job-embedded professional learning. The community participants include directors, supervisory officers, principals, district literacy and numeracy trainers, lead numeracy and literacy teachers, teachers, and information technology managers from nine school districts (six Anglophone, three Francophone) across the province. The intent of Learning Connections is to build capacity within the participating districts and schools to further student learning and achievement and to support the participants as they implement the Ministry of Education's Foundations program to advance literacy and numeracy. The project is structured in three phases: Phase One – project initiation in winter 2005 to the Summer Institute, July 2005; Phase Two – the 2005-2006 school year; and Phase Three – Summer Institute, July 2006 and the 2006-2007 school year.

This evaluation report focuses on the period of January 1, 2006 to June 30, 2006 and builds on the baseline report previously submitted for the period September 1, 2005 to December 31, 2005. Taken together these reports provide documentation and commentary of Phase Two of the project.

Data were gathered for this report from the following sources:

- Confidential interviews held in May 2006 with three key professional staff from the Literacy and Numeracy Secretariat and from two York University project managers. The interviews were transcribed for analysis.
- Visits to all ten participating schools in April-May 2006 to observe lessons focused on literacy and numeracy, and conduct interviews with teachers about the classes observed.
- A web-based survey given in May 2006 to the supervisory officer in each participating school district who is responsible for Learning Connections.
- An analysis of the content of the Learning Connections portal (learningconnections.on.ca).

The results of the analysis of these data are presented in this report in four main sections: Project Implementation, Classroom Observations, Participants' Perceptions of Learning Connections, and Description and Analysis of Online Activities. The report concludes with the Summary and Recommendations.

2. Project Implementation

2.1 *Background and context*

The implementation of the Learning Connections project in Phase Two was substantially impacted by differing perspectives held by Literacy and Numeracy Secretariat personnel and the Learning Connections project management team during Phase One and the first few months of Phase Two on two fundamental issues. The first concerned the operational implications of the project's contractual and funding status during Phase One and the first four months of Phase Two. The second centred on the perceptions of the respective roles and responsibilities of Secretariat and project management personnel for aspects of project implementation—specifically the development and provision of content for the Learning Connections portal and the teacher professional development activities that were to be part of the Learning Connections program. In this section, the differing perspectives on each of these project elements and their effects on project implementation are first discussed. These provide an important context for understanding the current implementation status of various project deliverables, which are taken up later.

2.1.1 Project funding

After Phase One was approved by the Secretariat and the funding for it obtained, a set of deliverables and a detailed budget was provided to the Secretariat, but no formal contract was ever signed. For Phase Two, neither funding nor a contractual agreement was in place by its scheduled start in September 2005, and according to project management no funds were made available for this phase until the Secretariat approved a budget and signed a contract based on a revised list of deliverables in late January 2006. The approved budget was substantially reduced over that initially proposed by the management team for Phase Two, down from \$730,566 to \$420,000, and a revised list of deliverables was agreed upon that reflected this reduction. In addition, the Secretariat requested that greater numbers of teachers be impacted by the project in the third phase.

Since the project managers were very uncertain in the fall of 2005 as to whether Phase Two of the project would receive any funding for its continuation, and since they were operating with no additional Secretariat funding at the time, they were reluctant to hire more personnel who could provide needed assistance with the development of professional development content for the project, act as facilitators for community building in the Learning Connections portal forums, and offer support and translation services for the three Francophone schools participating in the pilot. As a consequence, project documents and other professional development resources were not being made available in French to Francophone participants, online discussions were not being facilitated as thoroughly as needed to foster the development of a learning community across the participating boards, and insufficient professional development resources in literacy and (especially) numeracy were being made available through the program to community members. The managers were aware that these project needs were not being adequately met in the fall, therefore they attempted to fulfill them as best as possible using existing resources;

however, they felt that the outstanding budget and contract issues had to be resolved before they could commit to hiring the needed staff. Once the contract and funding were in place by the end of January 2006, they proceeded to hire several additional part-time staff to provide these services.

It should be noted that the Secretariat's perspective on the funding status of the project in the fall of 2005 appeared to be quite different. One Secretariat manager with oversight responsibilities for the project stated in an interview that the project "did have funding for the school year" and she expressed some astonishment at the idea that there was a disagreement on this point.

The funding confusion present over the fall also meant that the project management felt unable to hire supply teachers on an occasional basis as intended to provide release time for teacher participants, which would afford these teachers the time needed to become more involved in ongoing Learning Connections professional development activities. The net impact of the perceived funding uncertainty was a reduction in the speed and extent of the development of the learning community and kinds of professional development support that were the goals of the Learning Connections project.

2.1.2 Roles and responsibilities

For much of Phase One and the first months of Phase Two, the perceptions of the Secretariat staff and the Learning Connections project managers regarding their respective roles in and responsibilities to the project differed considerably. The resultant confusion delayed project development over the summer and fall of 2005. Each party had a set of expectations regarding the others' responsibilities which were perceived as not being adequately met. The perspective of the Learning Connections management team was that the Student Achievement Officers (SAOs) from the Secretariat would be actively involved as partners in the co-development of project content, providing direction on content topic and need, and facilitating access to experts on the content topics. They based this understanding on the final project proposal that was approved for funding by the Secretariat (see Appendix). While that proposal does not explicitly define partner roles in as straightforward a manner as it could have, it does appear to assign responsibility for content creation and delivery to both Secretariat and Learning Connections project personnel. After describing the various technologies to be employed in the project, it states that "The use of these technologies together with the program developed by the Secretariat's Student Achievement Officers will create a learning culture in which District-wide trainers, consultants, literacy and numeracy lead-teachers, principals and superintendents in seven (7) school districts will work collaboratively to share (create, reuse, re-purpose) learning activities." Later it indicates that part of the Learning Connections professional development program, labeled the "foundation program," will identify

...the core pedagogical competencies required to effectively deliver and lead literacy and numeracy training in the schools and the districts, along with the necessary ICT knowledge and skill required to work in an interactive collaborative environment. This program will be informed by the Ministry's Junior literacy and numeracy training roll-out, developed by the Student Achievement Officers and the ABEL Program consultant. The Student Achievement Officers will identify the pedagogical repertoire and the

literacy and numeracy content component of the program, and the ABEL team will identify and support the aspects of the program that can be enhanced and enriched by the use of the technology and applications.

In discussing personnel resources required for the project, the proposal states that “Key resource people for the program (presenters, instructional leaders, mentors) will be drawn from regional school personnel, from the Secretariat’s Student Achievement Officer staff, as well as experts well known provincially, nationally and internationally.”

The perspective of the Secretariat regarding its responsibilities to the project for content delivery was very different from that of the project managers. In the words of one Secretariat officer with project oversight responsibilities, it was “totally inconceivable” that the Secretariat would be contributing to the content. She noted that the Secretariat had many funded projects in play and that the Secretariat’s role was to be no more than a “critical friend” to these projects. She saw the Learning Connections’ literacy and numeracy professional development content as coming from the Ministry, and felt that the misperception around who would be developing content had “come very close to derailing” the entire project. She also noted that the Secretariat had taken an active role in recruiting schools to join the trial, and ensuring their continued involvement, but that SAOs were “just too busy” to have any further involvement. She thought that the Secretariat had taken on the project about a year too prematurely, “because the Secretariat itself hadn’t clarified itself enough to be able to direct a project of this size,” which had contributed to the confusion around project responsibilities. An SAO responsible for one of the school districts in the pilot indicated that SAOs did not have the time to visit the schools in the project for the specific purpose of talking about the Learning Connections activities. She saw the SAO’s role as largely providing direction and guidance through their participation in the monthly management teleconference held between project managers, project leads selected from each participating board of education, and SAOs from the various districts.

Because the Learning Connections managers expected that SAOs would be contributing much of the professional development training content, which the Learning Connections staff would then adapt and modify for use in the Learning Connections context, there were significant delays in the latter part of Phase One and the first months of Phase Two in the provision of substantial professional development content for literacy and (especially) numeracy. This delay limited the resources made available through the portal and the range of participatory activities offered to community members in the participating school districts.

The lack of clarity regarding roles and responsibilities in the project was resolved over the course of the winter. Project managers through their discussions with the Secretariat came to understand that the Secretariat was not intending to develop new training content for the project as that was not their role in the Ministry, but that it would facilitate access to Ministry training materials as they emerged. Learning Connections management developed a much clearer understanding of the Secretariat’s role as an accountability agency responsible for overseeing and facilitating the implementation of the Ministry’s literacy and numeracy initiatives in various districts. In the words of one manager,

You've got the program being developed at the Ministry, and you've got the accountability piece here which is the Secretariat, and you've got lots of expertise at the Secretariat, but they are not delivering program. Learning Connections is delivering program. So there's a disconnect. What happened was we would go to the Secretariat and say, we'd like to develop and provide some support for these districts to access professional development and learning, and we need the content, we need to have an understanding of the content, they couldn't provide that for us, because they are not delivering the content. And unfortunately what compounds that, we could say we'll just walk down a floor and get the content, but the Ministry is about 18 months behind where they need to be in the delivery of the training resources, because they are caught up in policy and they are caught up in translation.... We had really expected that the materials were already developed, and it was just a matter of getting our hands on them, and also re-packaging them so that they were modular and available in a variety of formats.

2.2 Phase Two implementation

2.2.1 Professional development activities¹

When no professional development activities for the project were forthcoming from the Secretariat by the early fall, the project management took the decision to proceed with their own generation of activities. They began in October with an activity called *Reflections on the Literate and Numerate Citizen*, which asked teachers to read a section of *Literacy for Learning – The Report of the Expert Panel on Literacy in Grades 4 to 6 in Ontario* and then follow-up with several related online activities. This was followed by *Focusing on the Student*, which ran from November through January and examined differentiated instruction. In this activity teachers were asked to work together in their schools to collate a class profile, identify within it some students that might need some significant extra assistance with respect to literacy and numeracy, and develop some activities that focused on the identified needs. This activity was translated into French for the Francophone participants. Participation levels were lower than hoped, with “at most 6 or 7” participants. The project was extended into January on the basis of feedback from the district leads, who requested extra time for the activity. The manager noted that:

In general the [forum] discussion was not at the level I'd like, and that's partly I think because we really need to have more teachers in it. Given 9 schools with an average of 2 teachers per school, that's only 18 people. So the tri-level model with the school, the district, and beyond, that part really didn't happen. The involvement of trainers in this was minimal, the principals were fairly involved, superintendents less so, and only actually one director, which we wouldn't have expected more than that.

The second activity, *Partner Sharing*, was run from mid-March to the end of April. It was simpler and more process oriented; participants in the community were to pick a partner and have a discussion with him or her about the strategies they use in their school related to the

¹ The online activities mentioned in this section and in section 2.2.2 are discussed to illustrate implementation of the project. For a detailed account of all activities, see section 5.

school and district plans for literacy and/or numeracy. Participation rates for this task were also disappointing. The manager commented that in both projects he heard verbally from a few individuals who had a good time actively participating, but these pairs did not document their exchanges in the portal for others to reference and benefit from. Asked why participation rates were so low, he indicated that he'd been told many times that "people were busy." He also thought the activity may not have appealed to some community members.

The final professional development activity for Phase Two, running through May 2006, was entitled *Continuing the Conversation*. It consisted of a shared reading activity, and was developed by the manager to support one of the primary tasks of the Secretariat's capacity building team, which was to promote shared reading. Copies of the Secretariat's training DVD on the topic were mailed to each of the participating schools for teachers to view, and parts of the accompanying worksheet were used as a basis for developing collaborative activities. As with the other activities, the management team took the lead in developing the activity, although it was reviewed and commented upon by district leads. As of the third week in May, the manager had noted very few postings around this activity in the relevant portal forum and was unsure of the extent to which it was being undertaken by teachers.

There had also been a book study structured as a mini-course that focused on *The Teaching Gap* by Stigler and Hiebert. The course was created by Robert Lebens and started in February with 12 participants. It ran for two months and had six participants who were actively involved.

2.2.2 Webcasts and video

Several webcasts featuring expert speakers have been conducted and then made available for later viewing through the Learning Connections portal as streamed media. For example, one focused on numeracy, two others on boys and literacy. In addition, the Learning Connections operations manager had encouraged teachers to share what they were doing in the classroom by creating short videos of their teaching activities, and three such videos were made, two of which the manager felt were of high quality and should spark reflective discussion of the type he was trying to encourage in the portal. The manager had found that most teachers were reluctant to be videotaped; he had hoped that there would be videos coming out of the book study group that could serve as the basis for a lesson study but this did not happen.

A few videoconferences were held over the second phase of the project, typically as a concluding event for an ongoing professional development activity. During the first multipoint videoconferences in the fall, there were network throughput problems in a few districts due in part to firewalls, which resulted in the degradation or loss of video or audio signals from a few sites. These problems were cleared up in cooperation with the boards involved, and the most recent videoconference, held in January, had no technical issues. One manager noted "I think we have got it down to where it works, but it is still a struggle."

2.2.3 Portal development

On the basis of feedback from both portal users and the December interim evaluation report authored by this evaluation team, the management team decided to revamp the Learning

Connections portal interface and structure in order to make it easier to use and more appealing. The initial design had proven to be a barrier to community members' engagement in professional development activities, so changes in display appearance and a simplification of operation were implemented. The use of tabs was eliminated in favour of drop-down menus, a powerful search function was added, and an email notification function for notifying users about content additions of personal relevance to individual community members was added. Users could customize the notification function, asking to be notified of new content on specific topics or activities. Requirements for the entry of metadata tags when community members were adding new resources to the portal were greatly reduced. Speed problems in accessing the portal were also addressed by the hosting company. One manager noted that the original portal design had been the responsibility of only two individuals, that the portal software company's expertise was not sufficiently tapped in the development process, and that the designers had not fully understood the functionality of the various components of the portal. "We have reduced the complication as far as we can", said one manager, "but if you reduce the complication any further, then you give up functionality." The operations manager indicated that he had heard no further complaints about the portal since the revisions had been implemented, but another manager expressed concern that project staff had by now come to rely too heavily on email for interacting with community members as a workaround to portal issues, "and this creates an expectation [in participants] that if they want me to do something somebody will send me an email. So if somebody's going to send me an email, I don't need to go to the community." It also led community members who were engaged in reflective dialogues to favour email over the forums for this purpose; as a consequence, community members were denied the benefit of sharing in and possibly contributing to that reflective process. "We're not even copied on it, so we can't cut and paste the best bits" noted one manager. "So we've got to figure out a way to drive that back into the community".

A critical goal for by the Learning Connections team was "to help people help themselves to the areas in the portal that have value for them." Management expected to meet this objective through the provision of more extensive content of greater value to the community, and through the recruitment of new members into the community in order to develop a critical mass of participants for meaningful interaction and reflection. It was noted that currently there are only 12 Anglophone lead teachers in the community, making it harder to build extensive dialogs around topics of mutual interest.

2.2.4 Francophone participation

Because the three Francophone districts participating in the pilot were implementing a distinctly different literacy and numeracy program than the Anglophone districts, implementing shared activities across the language barrier proved to be difficult. While the initial intention of the project management had been to have both Anglophones and Francophones participating in their first language in shared dialogs in forums and videoconferences, this has not happened. The belated hiring of a Francophone translator/facilitator for the project had resulted in delays of several weeks in getting English documents translated through most of Phase Two, despite some translation assistance provided by Secretariat staff and the contracting out of some translation work. This facilitator has now created parallel French areas in the resource library of the portal, and posted a number of French documents and other resources. Budget limitations have

precluded having forum discussions translated in either direction. The Francophone members of the community have not participated in English-language events or discussions, preferring to work only with their Francophone colleagues. This was because they desired great collaboration and resource sharing amongst each other rather than sharing with the Anglophone community. One of the Francophone boards was using their own portal and teachers from this board proved reluctant to access the Learning Connections portal as well. An attempt to run a videoconference from the Conseil scolaire de District du Centre Sud-ouest with a guest author failed due to a Bell equipment problem, but other Francophone videoconferences were held later in the year and are detailed in section 5.4.

2.2.5 Teacher release time

In Phase Two, participating schools were informed that they could request release time for lead teachers to engage in various project activities. Schools could invoice the project and would receive funding to cover the cost of substitute teachers. There was no fixed amount available for this purpose, and the schools in districts that had the greatest participation in the project such as Algoma and Keewatin-Patricia requested more funding than others. Release time was requested for participation in Learning Connections school planning meetings, Learning Connections videoconferences, and Learning Connections content development; for example, one teacher received three days release time to develop a teacher training video on a numeracy topic that included footage of him modeling teaching techniques in his own classes. A total of about 20 days of release time were requested over Phase Two by participating school districts.

2.3 *The challenge of meeting diverse needs*

A major challenge for the Learning Connections project in meeting its objective of building a functional learning community to support literacy and numeracy capacity building across a number of school districts is to address effectively the diverse needs arising from the disparate array of literacy and numeracy initiatives and implementation strategies found in different districts. A Learning Connections manager pointed out that school districts have identified different areas of need, have differing goals, and are employing different strategies for achieving these goals, which was making it very hard to come up with a set of resources and activities that would be of value to several districts. This challenge presents a significant hurdle for the project, because such resources and professional development activities are necessary for providing the structure and support teachers seek when involved in any professional development initiative. In this regard, one manager noted: “Although it’s [all] numeracy and literacy, it’s a funny thing that programs can be so different that teachers couldn’t say ‘I’m reading this book, let’s do something on reading this book, and let’s figure out how we use differentiated instruction in a novel study to engage our reluctant readers.’” A parallel issue developed in the project’s attempts to work with the district literacy and numeracy trainers, as each board had made different choices around who would be their trainers and how they would operate. Some trainers were principals, some consultants, and others teachers. They varied greatly in how and when they provided the Ministry-sponsored training to lead teachers in their districts. A Learning Connections manager pointed out that “One of the participating school districts delivered all of its training and used all 39 days of funded release time before Christmas, whereas a few of the other school districts don’t even know who their district-wide trainers were.”

Learning Connections management realized by February that the district trainers were not seeing the value of the Learning Connections network in helping them support teachers in classrooms, and that teacher participation in the community was lacking, so they began to adjust the program to meet these challenges. In developing their plans to move forward through the remainder of Phase Two and into Phase Three, they set aside their initial focus on Michael Fullan's tri-level model, with its goal of promoting whole-system change through scaling of an innovation from the school level through district-wide and then province-wide implementation. In conjunction with the Secretariat, the decision was made to allow the participating school boards to open participation to as many of their Junior Division teachers as they wished to, and to let them follow their own strategies for doing so, rather than bringing an additional 9 schools into the project in the 06-07 school year as had originally been planned. It is hoped that increasing the number of participants in this manner will build up the critical mass in the community enough to foster higher levels of participation in activities and greater reflective discussion in the portal. The newly participating schools will be provided with no new equipment other than one new video camera per board. The current VSee application will have limited use for videoconferencing as newly participating schools will not have licenses and will have to use the application with a guest account. In order to maximize school participation in real-time collaboration, support will be given for a videoconferencing solution that will use webcam, MSN Messenger, and Macromedia Breeze. A full list of low-cost hardware will be available for participating schools to encourage schools to participate in the program.

There will also be a shift in program content with a greater focus on meeting the needs of the practicing teacher, especially lead teachers, and less on promoting systemic change in the district. Job-embedded professional development activities will be complemented by classroom literacy and numeracy activities in which teachers can participate with their classes. Possible classroom-based projects suggested by managers included the sharing of student creative writing across districts, or joint report creation around shared scientific data collected by different schools. The intent is that by first involving teachers in classroom activities that have immediate utility to them, they can be more readily drawn into the professional development activities and discussions that are the primary focus of the community.

The repertoire of professional development activities and resources available to participants will also be greatly expanded, with the provision of journal studies, a book study, self-directed learning activities, webcasts, and guest speakers. Project managers have contacted participating boards and schools to determine their professional development and resource needs, and have worked with the designated district leads to look at what activities and resources might best address these. Additionally, the provision of pedagogical supports for the use of existing web-based Secretariat and Ministry professional development resources is being planned. A manager remarked on the potential this might have for building teacher capacity, citing an example:

The Ministry has all kinds of resources on their websites, and...the potential of them is pretty well untapped I would hazard to say. And mostly it's untapped because people don't understand the context to which they can apply the resources. So what we're focusing on in our program now is helping to bring that context. So if the Secretariat posts a webcast of Pauline Beder doing something on differentiated instruction, and it's a half-hour talk of her doing the highlights, then what we're planning to do this fall with

Tanya's help is to build program around the webcast that helps teachers understand the context of the theory and its application in the classroom. This will be achieved by posting readings, sharing understandings in a forum, posting activities that apply the theory in the classroom, and then sharing experiences and lessons learned in the portal. This results in a culture of reflection and professional sharing while at the same time deepens the level of understanding.

The overall intent of the portal, according to the manager, is that participants will select those topics and areas they want to engage based on individual interests and identified needs as well as site and district plans, and then easily access a rich mix of resources, professional development activities, and communities in Learning Connections to support their professional growth effectively.

To advance project implementation, once the Phase Two contract was in place the project hired additional personnel on a part-time basis: an Anglophone literacy specialist, an Anglophone numeracy specialist, and a retired Francophone principal from a French-language district with expertise in literacy. These individuals have the primary responsibility for moderating and facilitating the forums and activities in their respective areas. The Francophone principal also translates project documents into French for the Francophone district participants. Also working for the project on an occasional basis is a retired staff development specialist from the Toronto board, who created and led the book study in the winter and is now developing activities for the Summer Institute in conjunction with the literacy specialist.

The working relationship between Learning Connections project management and Secretariat personnel has been considerably strengthened over the course of Phase Two. A smaller, more focused team of SAOs (one from each participating school district) has been designated by the Secretariat to collaborate on the project, which has made it much easier for management to build clarity of communication, develop shared understandings about project goals and initiatives, collaborate in planning the upcoming Summer Institute, and lay out the new directions for Phase Three that were discussed above. There has also been a clarification of understanding around the respective roles of the project team and the SAOs in advancing Learning Connections initiatives and creating professional development activities and resources—specifically, that Secretariat staff work in an advisory and direction-setting capacity, participating in monthly management teleconferences with project managers and district leads, but do not have any direct responsibility for the creation or provision of activities or other content for the project. SAOs interviewed thought that despite its initial difficulties Learning Connections still had much to offer as a venue for professional sharing and capacity building, and were optimistic that given its sharpened focus it could prove an effective professional development resource for a greater number of teachers in Phase Three.

3. Classroom observations

During March 2006 the research team contacted the principals of the ten participating Anglophone and Francophone schools asking them to nominate either one or two teachers who best represented the Junior level literacy and numeracy practices in their school. Then during April and May 2006, we visited these teachers to observe them conduct a lesson. Twenty classroom observations were planned (ten literacy lessons, ten numeracy lessons); however two teachers—one numeracy teacher and one literacy teacher at different schools—were not available at the time of our visit, so we observed in nine classrooms for each subject. The purpose of the observations was to establish a baseline on current literacy and numeracy practices. Our intention is return to the classrooms of the same sample of teachers next year during the same period to assess the impact of Learning Connections on their practices.

We developed an observation tool for numeracy with nine dimensions: program scope, student tasks, discovery, the teacher's role, manipulatives, tools and media, student-student interactions, student assessment, teacher conceptions of mathematics, and student confidence. These dimensions, based on the NCTM's *Principles and Standards for School Mathematics*, were used by Ross, McDougall, Hogaboam-Gray and LeSage (2003) to examine the extent to which a group of teachers in Ontario had implemented "reform" ideas in mathematics education. For each of the dimensions there were one or two statements describing the classroom. A scale of 0 to 3 was used to rate the extent to which a particular statement described teacher practice in the observed lesson (0 = not applicable to observed class; 1 = minimal use: needs major increase; 2 = some use: needs some refining; 3 = optimal use: an excellent model for this aspect of teaching). Immediately beside a scale entry, observers could add notes and comments. A similar tool was developed for literacy classroom observation with the following nine dimensions: program scope, student tasks, discovery, the teacher's role, media and tools, peer interactions, student assessment, teacher conceptions of literacy, and student confidence. Prior to carrying out the observations, the research team viewed several video tapes of literacy and numeracy lessons, rated the lessons using the scales, and discussed any differences in ratings to ensure consistent application of the scales.

Before and after each classroom observation, the observer conducted a brief interview with the teacher. The purpose of the pre-observation interview was to ask about the goals of the lesson, how it related to previous classroom work, and if there was anything special on which the observer should focus. The post-observation interview was to debrief on the teacher's perception of how successful the lesson was. The observers also took notes on school and classroom literacy and numeracy teaching resources.

Below we summarize our observations, beginning with numeracy.

3.1 Numeracy observations

Mathematics lessons in four grade 4, two grade 5, one grade 5/6, and two grade 6 classes were observed. The size of the observed classes ranged from 23 to 30 students (average: 25) and the length of time of the classes ranged from 50 minutes to 165 minutes. The latter was an extended math period; the average of the other eight was 65 minutes. In all classes students were seated to

permit collaborative work; in two, students sat in paired rows, in the rest, students were in clusters (i.e., around tables or grouped desks) of four to eight.

The classes were largely homogeneous in terms of language spoken at home; in five of the Anglophone classes all students spoke English; in the other Anglophone class, all students spoke English but also spoke an Aboriginal language at home. In two classrooms observed in Francophone schools all students spoke French at home, although approximately one third and two thirds respectively also spoke English at home. In the third Francophone class only 6 out of 26 students spoke French at home; the others spoke mostly English at home. Out of the 204 students in the observed classes, four spoke a language other than English, French or Aboriginal; however, these students also spoke English or French at home.

In one of the classes each student had a wireless laptop. Most other classes had one or two working computers; one class had six.

The classrooms in general had very little mathematics on display: only three classes had displays of student mathematical work; two had a number line, one had a display of math terms, and four had posters with illustrations of mathematics concepts/procedures. In two classes observers noted a wide variety of manipulatives; four other classes had blocks and 3D shapes. No concrete objects for mathematics were seen in the other two classes. In some schools, materials such as shapes, tiles, tangrams, and 3D models may be stored in cupboards or in a central location. Ensuring that students have easy access to a variety of manipulatives and tools is one indicator of best practice in mathematics education, thus we note that schools need assistance in this regard.

The following is a summary of the results for each of the nine dimensions.

3.1.1 Program scope

Best practice in mathematics education at the Junior level emphasizes teaching all five mathematics strands rather than focusing exclusively on number sense and numeration, helping students make connections between and among strands, and ensuring that all students receive instruction on all strands. The two observation checklist statements around program scope were:

PS1: The teacher made connections to other strands of mathematics. (i.e., geometry & spatial sense, number sense & numeration, measurement, probability & data management, patterning and algebra) or other subject areas

PS2: Struggling students were involved in the same interesting tasks as their peers.

In most cases there was strong agreement with PS2 (average 2.6); all students were working on the same tasks (although in one case the observer noted that the tasks were not interesting.) With regard to PS1, however, there was more variation. Some teachers made connections to, and helped students use, ideas from other strands; some noted a connection but did not make use of it in the lesson; three made no connections. If we include these three 0's, and there is some support for doing so, the average for PS1 is 1.6. Although teachers may have difficulty seeing connections to other strands, we know that students benefit from working with linked ideas (e.g.,

multiplication and area); thus, we might argue that if statement PS1 was not applicable (i.e., a rating of 0), the lesson itself was weak.

Overall, the average for program scope was 2.1 (using the value of 1.6 for PS1). This indicates that teachers need additional help to view the mathematics curriculum as a coherent and connected body of knowledge.

3.1.2 Student tasks

The statements related to this dimension were:

ST1: Tasks used contexts that were appropriate and interesting to the students.

ST2: The problems used could be solved in different ways.

Four teachers rated at 3 on each of these statements; the average was 2.2 and 2.4 respectively. In most classes students worked on tasks that could be solved in a variety of ways, and there was an emphasis on process. There were two exceptions. In one case students worked on a computer-based task which the observer classed as “not interesting”, and in another, students had little opportunity for using alternate approaches.

In another class students were to find the area of a blob. The expectation for grade 5 with regard to irregular shapes is: “estimate and measure the perimeter and area of regular and irregular polygons, using a variety of tools (e.g., grid paper, geoboard, dynamic geometry software) and strategies” (Ministry of Education and Training, 2005, p. 80). Here the focus is on extending the ideas of area developed in earlier grades. For example, students in grade 5 might decompose a shape into known shapes, use formulas to calculate the areas and then find the sum to calculate the area of an irregular polygon. In the observed class, the emphasis was on counting grid squares (and parts of squares) to find the area of a non-polygonal shape; although students were engaged, this is a rather low level task, which does not draw on the full range of student knowledge at the grade 5 level.

The observations show that teachers are moving towards more use of tasks that are interesting to students and that can be solved in a variety of ways, but there is still work to do to ensure that tasks are appropriate for helping students develop deeper understanding of mathematical ideas.

3.1.3 Discovery

Teaching and Learning Mathematics: The Report of the Expert Panel on Mathematics in Ontario Grades 4-6. (Ontario Ministry of Education, 2004b) strongly supports an investigative approach to mathematics learning and adds that “students will often learn more deeply if they experience moments of hard thinking, followed by the satisfaction of finding solutions to the problem” (p. 14). In the checklist, three statements were used to evaluate the extent to which teachers have adopted these ideas:

DS1: The teacher asked probing questions that required deep student thinking.

DS2: The teacher did not immediately indicate whether or not an answer was correct.

DS3: The teacher provided significant time for student exploration.

The averages for these statements were 1.9, 2.4, and 2.7 respectively. Clearly, most of the teachers have embraced the idea that students need to spend time on exploration; however, many are not asking questions that involve students in thinking deeply about the mathematical ideas. The low score for DS1 combined with the moderate response to DS2 suggests that many of the observed teachers try to make math “easy” instead of giving students support to tackle difficult concepts.

3.1.4 Teacher’s role

The new curriculum emphasizes the importance of building a mathematics learning environment that supports the development of understanding. One of the ways that teachers can do this is by having students explain what and how they know. In turn, teachers must have deep knowledge of fundamental mathematics in order to respond with understanding to unexpected student responses.

The statements regarding the teacher’s role were:

TR1: The teacher regularly asked students to explain their mathematical ideas.

TR2: The teacher encouraged students to respond to or explain another student’s point of view.

TR3: The teacher responded with understanding to unexpected responses.

The averages for these three statements were 2.6, 1.6, and 1.8 respectively; these scores indicate that teachers are regularly having students explain. The importance of having students explain has been communicated through Ministry of Education documents and training sessions, and incorporated into textbooks developed for the new curriculum. Teachers who were observed frequently mentioned that sources such as textbooks and the *Report of the Expert Panel* have influenced their teaching.

At the same time, the results for TR2 indicate that teachers are less likely to ask students to explain another student’s idea. This indicates that most teachers are not yet holding mathematical “discussions” to extend and solidify concepts, but are instead responding to and evaluating the understanding of individual students.

Responses to TR3 were distributed over the whole range with four at level 1, two at level 2, three at level 3, and one at level 0. Since there could be a lesson without an unexpected student comment, we could leave out the 0, which gives an average of 2; this is moderately strong compared to averages for some other statements; however, observers’ notes indicate that two teachers responded in ways that would lead students to incorrect ideas and that another teacher ignored a student’s response, thereby missing a valuable teaching opportunity. In addition, a

rating of 1 (minimal use) could simply mean that students did not have occasion to offer “unexpected” ideas.

Thus, the observations suggest that teachers are in need of support with regard to having students communicate their understanding to one another, (e.g. in a class discussion), and gaining deeper understanding of the concepts they teach.

3.1.5 Manipulatives, tools, and media

Manipulatives are an important part of the mathematics program; when used appropriately they help students build understanding of math concepts. In addition to blocks, shapes, and other concrete materials, calculators, software programs, and “virtual manipulatives” can be used. The *Report of the Expert Panel* notes: “Exploring mathematics with technological applications should be an integral part of the Junior mathematics program” (Ontario Ministry of Education, 2004b, p. 28).

The statements related to this dimension were:

MT1: Students had easy access to a variety of mathematical tools, including technology.

MT2: Students used a variety of means (models, drawings, graphs, symbols, concrete materials, manipulatives etc) to represent mathematical ideas.

The averages for these two statements were 1.7 and 2.1, respectively. Only one teacher received a rating of 3 for both statements. A problem with the rating scheme was the use of the word “variety” because observers saw only one lesson; although most lessons involved hands on activities, those activities tended to involve only one manipulative. Across classes there was a wide variety of tools used – e.g., tiles, blocks, fraction strips, grid paper, technology (internet), learning carpet – and many teachers talked about the importance of hands on learning and their use of manipulatives.

One interpretation of “variety” is the idea that individual students may choose whatever tool they think is appropriate for modelling the concept or solving the problem. The *Report of the Expert Panel* states: “Different students may choose different manipulatives, depending on how they think about the problem, and they should use their chosen manipulative to solve the problem and to explain their thinking” (Ontario Ministry of Education, 2004b, p. 26). In the observed classes students were given a particular tool or set of tools to use – usually in a prescribed sequence, e.g., model with cubes, record on chart paper, represent on grid paper. Students did not have to decide which tool was appropriate for the given task.

Ratings for MT2 were moderate (average: 2.1). Teachers are aware of the need to represent mathematical ideas in a variety of ways, perhaps because of the mantra “pictures, numbers, and words”, which is often associated with EQAO tests. Nevertheless, there were some classes in which students worked with only one representation when additional representations could have assisted students in making sense of the concept. In particular, one group of grade 6 students worked on three-dimensional geometry without models.

Junior (and Intermediate) students need to use manipulatives just as much as their primary counterparts, and need to work with multiple representations of mathematical ideas; the responses to MT2 indicate that many teachers, while moving towards more hands on learning, are not yet comfortable with this framework. They need to focus more on allowing students to choose appropriate tools, and on helping students to use a variety of representations for mathematical concepts.

3.1.6 Student-student interactions

Small group work in which students explore ideas together is a key idea in the new curriculum. In the checklist, observers were asked to rate the lesson in regard to the following statement:

SI1: Students interacted with their peers about the mathematics.

The average rating on this statement was 2.3, which is moderately high. All teachers had arranged their classrooms so that students could interact with their peers in pairs or in larger clusters. In four classrooms the interaction was minimal; students worked on their own and checked occasionally with a peer about particular answers. In these classrooms the tasks were essentially individual, although informal work with partners was allowed or encouraged. In the other five classes students actively worked in pairs or groups to carry out an exploration. This suggests that some teachers may need help with structuring group activities to make the most advantage of group members' skills.

3.1.7 Assessment

“Best practices” in assessment, involve using a variety of strategies, and incorporating assessment as an ongoing part of the learning process. Because there was only one opportunity to observe each class, it was not possible to report whether teachers used a variety of assessment strategies; thus, the following statement, which addresses the idea of ongoing assessment, was used.

AS1: During the lesson the teacher engaged in some form of assessment.

The average rating on this statement was 2.3. In three cases, the final tasks were to be submitted for marking; in the other classes (to varying degrees) the teacher used informal observation and questioning of students during the lesson to assess understanding.

The observations suggest that teachers are aware of the ongoing nature of assessment but that they need additional support to incorporate assessment strategies into lessons.

3.1.8 Conceptions of mathematics

Ross et al. note that “The teacher’s conception of mathematics in the reform class is that of a dynamic subject rather than a fixed body of knowledge,” (2003, p. 348). This implies that teachers see mathematics as more than procedures and can move beyond explaining rules to help students make sense of the underlying concept. It also requires that teachers model the use of

appropriate mathematical language to help students learn to communicate their ideas with clarity and precision.

The following statements were used to investigate teacher's conceptions of math as a discipline:

CM1: The teacher consistently modeled appropriate mathematical language.

CM2: The teacher went beyond rules to help students make sense of the math in a meaningful way.

The average rating for CM1 was 2.8; this indicates that the observed teachers had a strong commitment to using appropriate language. In particular, one teacher from a Francophone board noted that she focuses on words because students need more than one way to say things, and because there are subtle differences between phrases that may confuse students – especially those who speak English and French.

On the second statement, CM2, which looks at a different aspect of this dimension, the average was lower at 2.3. Over half of the teachers made only minimal or some use of this strategy, and in most cases, the statement applied to interactions with individual students or pairs of students, rather than to the whole class during discussions.

The fairly strong results indicate that most teachers use appropriate mathematical language and go beyond the rules to help individuals make sense of the mathematics; however, in most cases observed teachers focused on procedures and facts first, which suggests that teachers' conception of mathematics is still rather limited.

3.1.9 Student confidence

Confidence is a key component of student success. Teachers help students feel confident by connecting new mathematics to already-held ideas.

The following two statements were used to collect data on this dimension:

SC1: Students showed engagement/enthusiasm.

SC2: The teacher made deliberate connections to prior knowledge.

The average ratings for these two statements were quite different, 2.7 and 2.3, respectively. Although one observer noted: "Struggling students seemed less engaged," in most classes all students were engaged and enthusiastic. For example, two observers commented: "All students are highly enthusiastic, highly engaged in tasks and learning concepts," and "All students are highly engaged at all times".

With regard to the other statement, observers' ratings were more varied (five level 3's, two level 2's, and two level 1's.) This indicates that some teachers are not making explicit connections to

prior knowledge whether this is concepts learned in earlier grades, previous lessons, or ideas connected to familiar contexts.

Overall, students in most of the observed lessons demonstrated confidence in their ability to carry out the assigned tasks.

3.1.10 Summary

Taking an average of the ratings across each dimension, the results are: program scope: 2.1, student tasks: 2.3, discovery: 2.3, teacher role: 2.0, manipulatives, tools and media: 1.9, student-student interactions: 2.3, student assessment: 2.3, teacher conceptions of mathematics: 2.6, and student confidence: 2.5. Although there are differences with regard to statements within the dimensions, as mentioned above, these numbers suggest that teachers are fairly strong in their conceptions of mathematics, and in building student confidence; they are moving towards some of the new pedagogical ideas such as use of open tasks, emphasis on discovery, having students work together to explore ideas, and doing ongoing assessment in a variety of ways. They are less comfortable with using a variety of tools (and allowing students to choose their own tool), making connections to other strands of mathematics, and having students move between different representations of mathematical concepts. They are also in need of deepening their own understanding of some mathematical concepts. In addition, although the observed teachers have embraced the idea of having students explain their understanding this is usually at the level of individual response. There is much less awareness of the importance of having students communicate their understanding to one another.

It is also evident from the ratings that the dimensions are closely linked. In particular, teachers who received a total of 5 or 6 on program scope, rated highly on most other dimensions as well. Total scores for observed teachers ranged from 18 to 53 out of a possible 54; two were above 50, five between 40 and 49, two between 25 and 29 and one below 20. Observers' comments confirm that those who scored below 30 were weak in many areas; those between 40 and 49 were moderately strong; and that the two teachers with the highest scores were highly competent.

3.2 Literacy observations

We observed literacy focused lessons in grades 4 (1 lesson), 5 (5 lessons), 6 (2 lessons), and 4/5 split (1 lesson). The size of the observed classes ranged from 17 to 30 students (average: 21). The classes tended to be long, varying from 70 minutes to 105 minutes. The average length of the classes was just over 80 minutes. Classes included a variety of seating patterns including single and paired rows, a semi-circle, and random and assigned clusters (around tables or grouped desks).

Though one class was organized as a female only class in the observed timeslot, and was made up of students from the both French immersion and the regular English programs, other classes included both female and male students. All English language classes tended to serve native English-speaking students, with one aboriginal student included in one class. In one of the French language schools, the majority of students spoke French at home; in the other most spoke English at home.

Classes had few computers, on the whole; one class had no computers in the classroom. Other classrooms had from 1 to 3 working computers. Complaints were made that not all computers available to teachers were in working order. On average, there were 1.5 working computers in the observed classrooms.

The classrooms in general displayed student literacy assignments and art work, and posted information on reading and writing conventions and processes as well as other textual-visual information, such as posters and maps, on classroom walls. The alphabet was a standard in each class; most classes had sets of dictionaries, as well as book displays. Also displayed were homework information, rules of behaviour, photos, flags, and religious iconography. Games and coloured pencils were available in some rooms as well.

Libraries varied significantly in amount and kind of resources, and in character. Four school libraries had no computers. In one of these schools, no computers had been placed in the library on purpose as many computers, including a large number of wireless laptops were available to students throughout the school. On the other hand, one school library had thirty computers.

Reports of the spaces provided for literacy involvement ranged from small, poorly resourced and unwelcoming rooms to beautifully designed spaces with variable seating including comfortable sofas and novel areas (one library had an old-fashioned claw-footed bath-tub used for displaying books), interesting nooks and crannies; books posters, and art displayed; colouring pencils and mobile whiteboards available; and library help provided for children. Two schools had a full-time teacher-librarians.

The following is a summary of the results for each of the nine dimensions.

3.2.1 Program scope

Three specific observations were made in this category, based on the following statements:

L1: The teacher taps a variety of literacy modes: reading, writing, listening, speaking, viewing and representing.

L2: The teacher makes cross-curricular links

L3: Modifications are made for non-native speakers and those with special needs.

Literacy is multimodal, including fundamentally: reading, writing, speaking, listening, viewing, representing, and utilizing various media, as appropriate to social circumstance. Scores in the first category, L1, were consistently high: 3 for all but one teacher who scored 2, due to the nature of the aims of that particular lesson.

Literacy facilitates engagement in other subjects that are talk- and text-based, so across the curriculum perspectives are important in the literacy classroom. Scores in the second category, L2, ranged from levels 1-3, with most results at level 2. A number of teachers actively incorporated curricular subject matter into their literacy lessons, including social justice issues, geography, and science. Two teachers admitted to a test-focus in their literacy class work.

As for the third category, L3, the few observations of accommodations made for non-native speakers (NNS) and IEP learners may reflect the low linguistic diversity in the population of the schools observed rather than insensitive teaching. There were five observations rated level 0 in this category; those who did make accommodations were rated level 2 and 3. Most language accommodations were made by teachers in French schools to meet the needs of students who spoke more English than French at home.

3.2.2 Student tasks

The statement related to this dimension was directed at boys and literacy:

L4: Gender-sensitive practices and activities are included.

Results were generally low though it was noted that some classrooms had resources that were geared to boys' interests. Three teachers showed no signs of gender-sensitive practices; 2 were observed to be minimal (level 1); three at level 2; only one teacher was observed at level 3. This is disappointing given the vast amount of public attention on boys' poor performance on literacy measures in comparison to girls, and the proliferation of workshops geared to addressing this disparity (including a Learning Connections video presentation by a Student Achievement Officer on the topic).

3.2.3 Discovery

Literacy is process oriented, though typically it is literacy products that are graded. Process writing, an established literacy orientation, understands literate expression as a recursive process, involving repeated editing and consultation with peers and the teacher. In this dimension, we probed the process orientation of literacy instruction in the classroom:

L5: The teacher uses a recursive approach that reinforces literacy as process rather than product.

The results were very positive: six teachers scored level 3 and three level 2 indicating that teachers had a good general understanding of literacy as process.

3.2.4 Teacher's role

Our probe here was the teachers' incorporation of literacies in social as well as academic contexts. School educates children to become functioning members of society, yet the literacies taught and tested in school tend to become focused on classroom and academic goals. According to *Literacy for Learning – The Report of the Expert Panel on Literacy in Grades 4 to 6 in Ontario* (Ontario Ministry of Education, 2004a), it is important to link the student's understanding of social communication in life to school literacies. We used the following statement in classroom observations:

L6: The teacher links literacies in and out of school.

Observations spanned the scale with four teachers rated at level 3; three at level 2; one at level 1; and one at level 0. Ties were made to bullying behaviours in one literacy class; and Mother's Day was used as a focus for activities in another.

3.2.5 Media and tools

This category varies from that used in mathematics classroom observations because manipulatives are not characteristic resources in the literacy classroom: however, media and tools are. As the social influences on communicative needs, competencies, skills, media, genres and conventions move from those of the Industrial Revolution, to those of the Information Revolution, so too do the requirements of literacy education change. Schools are slow to update literacy education paradigms for a number of reasons, not the least of which is the expense of buying digital technology. The *Expert Panel on Literacy* presents expanded views of school literacies to include 21st century media. (The Learning Connections project is, itself an example of 21st century literacies.)

The two statements written for this dimension were:

L7: The teacher uses digital media in the lesson.

L8: Students make use of technological tools for literacy practices.

Results reflected low utilization of digital media in the lessons observed and little student access to technological tools for literacy practices. In both categories ratings ranged from 0 to 2. In L7, there was no evidence of digital media in the lessons of three teachers; four had low use (level 1); and two had moderate use (level 2). Students made use of technology even less: four classrooms showed no evidence; four showed minimal use (level 1); and one incorporated technology at a moderate rate (level 2). A variety of reasons may explain this, including lack of

computers, technical problems with available computers, or unfamiliarity with how to use other available media for teaching.

3.2.6 Student-student interactions

Literacy requires multidimensional communication. The traditional teacher-centred classroom does not provide sufficient opportunities for students to interact with each other in spoken and written communication. Peer interaction is fundamental to process writing; collaboration is fundamental to the problem-based learning essential to digitally mediated communication.

The observation statement was:

L9: Topical peer interaction is encouraged.

Peer interaction was observed in all classrooms. However, in four classes only minimal student-student interaction was in evidence (level 1); in three classes, moderate student-students interaction was observed (level 2). In only two classrooms were there abundant opportunities for students to interact with each other (level 3). One teacher who was concerned about noise volume in her classroom limited and controlled opportunities for students to interact with each other to keep the noise level down. These observations suggest that teachers need help in managing lessons that encourage student to student interaction.

3.2.7 Assessment

“Best practices” in assessment, involve using a variety of strategies, and incorporating assessment as an ongoing part of the learning process. Because there was only one opportunity to observe each class, it was not possible to report whether teachers used a variety of assessment strategies; thus, the following statement, which addresses the idea of ongoing assessment, was used.

L10: Appropriate assessment is built into the lesson.

It can be difficult to observe assessment in the literacy classroom as it is often as unobtrusive as a teacher noting which child reads what, where, and when. Some literacy practices are inherently assessment oriented, such as shared reading when conducted by class members. This offers an opportunity for the teacher to note miscues, for example, which can indicate comprehension and other reading problems.

Results on this dimension were spotty: no evidence of assessment was seen in two lessons; only minimal evidence of assessment (level 1) was seen in three lessons; one lesson incorporated a moderate amount of assessment (level 2) and three were judged at level 3.

Teachers may be aware of the ongoing nature of assessment but these observations suggest that they need additional support to incorporate assessment strategies into lessons.

A second statement that straddles assessment and student confidence (L13 below) was:

L11: The teacher provides specific feedback of a positive nature: any corrective feedback is constructive and specific.

Results were excellent in this category with only one teacher showing anything other than strong evidence (level 1) of positive feedback. All other eight classrooms were judged at level 3.

Positive feedback is especially important in literacy practices that hinge on oral involvement. Students are often shy to speak publicly. Negative or overly critical feedback will curtail students' enthusiasm to participate in discussions. Similarly excessive red pen corrections on written work emphasize the mechanics of writing over the content and creativity of the message being communicated. Positive feedback emphasizes communication as a process.

3.2.8 Teacher's conception of literacy

The twenty-first century has ushered in an era of dramatically changing communication that impacts strongly on how teachers understand, teach, and assess literacy. Children's literacy practices at home and in the community are based in contemporary digital media that require more independent work, critical reading, writing, viewing, and information-seeking skills. It is important to understand how the world is changing and what those changes mean for the types of communication we expect children to master in school.

This dimension stated:

L12: The teacher fosters the development of critical, variously situated literacies.

Three teachers scored level 3 in this category; four, level 2; one level 1; and in one classroom no instance of the teacher fostering critical literacies was seen. In one excellent example, the teacher discussed racism in a literacy lesson focused on social justice.

3.2.9 Student confidence

Confidence is a key component of student success. Literacy instruction should prepare students to successfully and articulately compose and express their own point of view.

The following statement was used to collect information on this dimension:

L13: The teacher validates learners' individual identities, and encourages them to develop their own voice.

There was a very positive response to this statement with five teachers being observed at level 3; and four at level 2.

3.2.10 Summary

According to the dimensions observed, strengths were seen in the:

- variety of literacy modes used (dimension 1: program scope);
- cross-curricular links made (dimension 1: program scope);
- process emphasis in literacy instruction (dimension 3: discovery);
- incorporation of social literacies in the classroom (dimension 4: teacher's role);
- use of positive feedback (dimension 7: assessment);
- encouragement of individual identity and voice in the classroom (dimensions 7: assessment, and 9: student confidence); and
- teacher's incorporation of critical, variously situated literacies (dimension 8: teacher's conception of literacy).

Areas of concern requiring attention include the:

- accommodation of students needing particular language assistance (dimension 1: program scope);
- incorporation of gender-sensitive practices (dimension 2: student tasks);
- use of media and technological tools in the classroom (dimension 5: media and tools).

Improvement is also called for on the:

- promotion and support of peer interaction (dimension 6: peer interactions); and
- use of appropriate assessment (dimension 7: assessment).

A striking comment frequently made in both pre- and post-observation interviews concerned the source of inspiration for lessons taught, which in most cases involved a workshop, often at the board level. Whereas this is a good indication of teachers using local resources, it indicates that teachers are looking more to physical workshops than they are to the digital resources, such as those available through Learning Connections. Digital media, in general, were poorly utilized both in literacy instruction and in teachers' ongoing professional development.

4. Participants' Perceptions of Learning Connections

In this section, we provide a sampling of participants' perceptions of the project. We begin with the perceptions of teachers whose classrooms we observed in April/May 2006; following this we describe the results of a survey given in May 2006 to superintendents in each board.

4.1 *Perceptions of observed classroom teachers*

At the end of our classroom observation sessions, we asked teachers 'What are your impressions of the Learning Connections? What would be your comments or suggestions we could report to the managers of the program?' Of 16 teachers, 12 responded to the last set of questions of the post-observation questionnaire.² Four were not involved in the project and therefore offered no comments.

Teachers' responses ranged from very favourable to less than favourable; they also offered a number of suggestions aimed at improving the program in the next phase.

4.1.1 Favourable comments

Six teachers made general comments about the program being useful; they considered it a good learning experience with benefits for participants. Teachers appreciated the idea of an online community for teacher professional development. They value being part of this community, and want to continue being involved in the Learning Connections program. One teacher in particular evaluated this project as a great learning experience, a project that met the teacher's expectations.

More specifically, teachers appreciated certain materials, training, and resources offered by Learning Connections. They commented on the shared reading program; webcasts, in particular the fact that they are archived and accessible to teachers any time; early learning materials on technology; the webcast on the Tinkerplots statistical software; and teleconferences as useful and conducive to in-depth discussion.

Teachers also appreciated some other aspects of the Learning Connections program. One teacher commented on how the Learning Connections follows changes in the curriculum and keeps teachers updated. All teachers from the Francophone schools commented on the introduction of a French moderator and expect positive changes in the portal.

Finally, one teacher expects positive developments in the future with the program expanding which will give the teacher an opportunity to share with teachers in two other schools within the school board.

² Although 18 lessons were observed, two teachers taught both literacy and numeracy; hence responses were obtained from only 16 individuals.

4.1.2 Less favourable comments

The largest number of less favourable comments focused on unclear expectations for the program, especially at the initial stages. Eight teachers commented on the lack of clarity of expectations around their participation and directions which they are expected to take in the program. Several teachers remarked on their lack of understanding of the project aims or inaccurate understanding at the initial stages of the project. Others feel there is lack of clarity as to their roles and the direction of the project, and feel that project goals and participants' responsibilities need to be spelled out more clearly.

A second set of comments dealt with the technical problems. Seven teachers indicated that frequent technical problems, especially with videoconferencing, served as an obstacle to more active and productive participation. Three teachers also commented on the issues connected with the portal being not very user-friendly. They said the portal is difficult to use, it is hard to find discussion threads and materials. One teacher also commented on the removed and disembodied nature of the portal that gets in the way of more active engagement.

Another project problematic that many teachers shared is a lack of time for participation, and the unrealistic expectations that the project places on teachers. Six teachers commented that time is an issue for them, and that the project's demands on teachers are too high. Additionally, one teacher argues that change takes time and feels that the Secretariat's expectation for change is unrealistic.

A number of unfavourable comments focused on the materials that the portal provides. Three teachers believe that in addition to the theoretical documents put out by the Ministry there is a need for practical materials that they could use in the classroom. Three teachers from the francophone boards would like to see more materials in French. Two teachers also commented on the fact that their school is ahead in their training compared to other schools, and many of the practices that the portal is focusing on are already in place in their school. One teacher felt that this project may be implemented more successfully at the secondary level than at elementary.

One teacher expressed concern with the training model where only a limited number of teachers from each school get training. The teacher believes that the trickle-down model is not very efficient.

Three teachers talked about lack of active participation from other teachers and cited that as a discouraging factor in their own participation.

Finally, two teachers commented on the lack of support for the project from their school. One teacher said they had no computers in the library, the other commented that the equipment is in place but is not connected, or there is no room to use it.

4.1.3 Suggestions for program managers

Teachers made a few suggestions to the program managers that aim at improving the program in its later implementation stages. First, suggestions were made regarding the structure of the

training. One teacher believes that training should be organized by grade, allowing teachers to share resources by grade, and then extrapolating this professional sharing to the whole division. Another teacher wondered whether they should share within their school board first and then go outside of their school board to share resources and practices with other teachers in the project. Further, one teacher commented on the importance of making contacts with other teachers participating in the project early in the school year. She has already made contacts with a teacher this year and expressed a wish to know whether participants are going to change to be able to make contacts early enough in the academic year. The last suggestion was to hold the Institute during the school year because some participants would be away on vacation in the summer.

A second set of suggestions focused on a need for more practical materials to accompany the theoretical documents. Also, more French resources are required in the Francophone portal.

Several teachers suggested that the roles and demands on the participants be clarified. Participants need to know exactly what is expected from them in the project, as well as some guidance as to their progress in the project during the academic year. There is also a need to clarify what participants can expect from the project.

One teacher suggested they be given coping strategies to help teachers manage their time and fit the project into their schedules.

Finally, one teacher believes that more should be done with the hardware available to the project to create discussions and forums online.

4.2 *Perceptions of superintendents*

Superintendents at each of the nine participating boards were asked to complete a 16 item web-based survey. These superintendents were the primary contacts in the boards for the project. Nine of the 16 survey questions asked respondents to indicate the extent to which they were aware of or participate in various aspects of the project; the remainder asked them to supply short answers. Of the nine potential respondents, only four (two Anglophone, two Francophone) responded despite a follow-up e-mail asking them to respond. This represents less than a 50% response rate, therefore caution has to be used in generalizing from the results.

Two superintendents replied that they were “very aware” of the project and two were “somewhat aware.” As a follow-up, they were asked what activities they were aware of and all said they knew about webcasts and online discussions. An Anglophone superintendent commented that their teachers were “very interested in collaborating with other classrooms and involving students,” but they have had difficulty doing so; a Francophone superintendent commented on the lack of French materials available at the portal.

The superintendents’ involvement in the project or use of the portal has been minimal as can be seen from Table 1 below. Occasionally they appear to be accessing text resources and reading discussion forums. The calendar function seems like a useful item for them too, which suggests that the project management ensure that this is always up-to-date and contains links to all of the project events.

To what extent have you used the portal for...	Not at all	A few times	5 to 10 times	Fre- quently
Accessing provided text resources	1	3	0	0
Viewing streamed media files	3	1	0	0
Using provided web links	3	1	0	0
Reading discussion postings	1	3	0	0
Checking the Learning Connections calendar	2	1	1	0
Contributing to forum discussions	4	0	0	0
Participating in videoconferences	4	0	0	0

Table 1: Superintendents' survey responses on extent of portal usage

Despite their lack of use of the portal, superintendents still believe that the Learning Connections program's goals and objectives fit to some extent with their district's priorities: responses were "completely" fits (1 superintendent), "adequately" fits (1 superintendent), and "partially" fits (2 superintendents). The project also appears to be having some impact according to the superintendents: responses were split with one superintendent each answering "substantial," "moderate," "limited," and "very limited." In a follow-up question about the impact, both Anglophone respondents and one Francophone commented on the opportunities the project has made to allow teachers to share best practices. The other Francophone respondent said that teachers prefer to use their board's portal because of the preponderance of English activities in the project.

When asked to describe any obstacles or challenges that have reduced the project's effectiveness in their district, competing demands for teachers' professional development time, initial technical problems, and finding "teachers/classrooms for teachers to interact with" were cited as well as the lack of French materials. To meet these challenges, the Francophone superintendents praised the hiring of a Francophone facilitator and look forward to improvements next year. Another suggestion by a Francophone superintendent was to record how often participants visit the portal and what they view, something which is currently possible. One Anglophone expressed uncertainty about how to interest other teachers in the project, the other did not respond.

Lastly, superintendents were asked for suggestions on how Learning Connections could better meet their district's goals. Both an Anglophone and a Francophone stressed the importance of working closely with boards/principals to ensure the project is better integrated into their plans and not be an add-on. Another suggestion was to take small steps and not change the technology significantly nor add too many participants.

5. Description and Analysis of Online Activities

Earlier in this report some project activities and resources associated the Learning Connections portal were briefly described in the context of analyzing the implementation of the project. In this section we outline in greater detail all of the portal professional activities hosted between January 2006 and June 2006 inclusive.³ We conclude the section with some general observation about the portal.

Three main categories of events are available to the members of the community through the Learning Connections portal – webcasts, professional sharing activities, and videoconferences. The events organized for the Francophone school boards are described in a separate section.

5.1 Webcasts

Webcasts are advertised in the portal calendar, and can be accessed by clicking on a specific date on the calendar and following the link provided. Below is a listing of the webcasts available to community members.

- On April 11 2006 Craig Featherstone gave a presentation entitled *Placing the Right Value on Place Value*. This webcast was a joint project between Learning Connections and the ABEL project. The webcast focused on the understanding of place value in the context of math instruction in developing number sense, and dealt with the misconceptions students have of place value, as well as examined effective strategies of promoting the learning of place value. The Learning Connections website provides a link to the event description. Participants were required to register in order to receive a link to the webcast. The webcast was accessible only at a specific date and time. This webcast is archived, but the calendar does not offer a link to the archived version. It can be found in My Community: PD Connections tab.
- On April 27 a webcast of David Booth focusing on *Literacy and Boys* was organized by Learning Connections and posted to the online community. The webcast features David Booth giving a talk about boys and their literacy practices, focusing on boys and language, boys' interest in reading, and includes a video of the speaker's male students talking about their literacy practices. The webcast is 1 hour 43 minutes long. The link to the webcast is permanent and it can be accessed by the community members at any time. Although the calendar does not have a link to this event, the webcast is advertised on the home page, and is easily accessible.
- Two external webcasts are also featured on the Learning Connections portal, both organized by the Ontario Secretariat for Literacy and Numeracy. The Learning Connections portal provides a link that the participants need to follow in order to view

³ For a description of the portal activities from September 2005 to December 2005, see the Phase 2 Interim Evaluation Report.

webcasts on a specific date. There is also a possibility to view the archived versions of these webcasts at the time convenient to the participants.

- On February 23 at 3:45 pm a webcast on *Successful Practices in the Education of Black Students* was featured. This webcast was presented by Dr. Asa Hilliard, with additional presentations by Dr. Christopher M. Spence, Elizabeth Sinclair-Artwell, Dr. George Dei, Dr. Carl James, and others.
- On March 29 at 3:45 pm a webcast entitled *Differentiated Instruction* was offered. It was introduced as a follow-up to the ongoing discussion in the community on differentiated instruction. Four experts, namely Dr. Lyn Sharratt, Dr. Jeffrey Wilhelm, Camille Williams-Taylor, and Elizabeth Coelho are featured in this webcast. The discussion offers a general overview of differentiated instruction, as well as specific strategies effective in working with different student populations.
- On May 24 at 9:30 am Bev Freedman from the Literacy and Numeracy Secretariat delivered a webcast on *Instructional Leadership*. This webcast was primarily aimed at principals and superintendents and focused on recent research in effective instructional leadership strategies. The webcast was recorded and is posted online.
- On June 2 at 3:30 pm a webcast on *Developing Data Literacy in Grades 4-8* was featured. The presenter was Tom Steinke, a Learning Consultant from Pearson Professional Learning and former Mathematics and Science Consultant for the Ottawa-Carleton DSB. The webcast focuses on teaching data literacy in engaging and developmentally appropriate ways. It uses Tinkerplots dynamic statistics software and Census and School data. The webcast was captured and can be accessed by following a link provided. In addition, materials used in the presentation are posted in My Communities>PD Connections.

5.2 My community: Professional sharing

The Professional Sharing section of the Learning Connections portal is a space where the members of the community access assignments on different topics related to literacy and numeracy, share their resources, as well as discuss their ideas and raise questions and concerns. Two main categories of professional development activities are featured under Activities and Ideas. Each category is described below.

5.2.1 Activities

Participants can access activities and discussion by clicking on a topic. Threads with new postings are flagged which makes the portal more user-friendly.

5.2.1.1. Partner Strategy Sharing Activity – Posted on 7 April 2006

The Partner Strategy Sharing Activity was a new initiative introduced in order to facilitate discussion among the project participants. The participants are invited to summarise the strategies they use in literacy and numeracy to reach their district objectives, share these strategies with a partner from another district, and finally report on the results of the sharing

activity on the forum by April 30. The portal offers a space for the participants to enter the names of their group members, and a forum space to share the reports of their partner activities. Two pairs of participants, Candela-Stilin and Minardi-Skrupski, have reported about their activities, and reflected upon the differences and similarities in their strategies and how the sharing enriched their understanding of literacy and numeracy instruction. Brian McLean engaged in discussion with participants, asking further questions about their activities.

5.2.1.2. *Continuing the Conversation – Shared Reading – Posted on 26 April 2006*

This folder contains activities based on the Literacy and Numeracy Secretariat's DVD *Shared Reading: Continuing the Conversation*. The folder offers 9 professional development activities that were designed by the Learning Connections team in order to help project participants integrate the Secretariat's training into practice. The suggested timeline for the activity was April 25 to May 30, and a schematic time frame outlining the desired progress is provided for participants' convenience.

The folder contains 4 subfolders with activities related to the DVD. The activities are based on the worksheet that accompanied the DVD, and offers activities that would help teachers work through the DVD and share their insights around it. Participants are asked to carry out the activities and upon completion post them to the appropriate folders. To date, no responses have been posted.

Six discussion forums are also posted, each offering questions related to the DVD for discussion and a space for the participants to post their responses: Activity 3: Learning Environment, Activity 4: Accountable Talk - Collaborative Learning Structures; Activity 4: Language Boxes & Student Interviews; Activity 6: Strategies and Scaffolding; Activity 7: The Lesson; and Shared Reading Activities: Feedback. At the time of writing no responses have been posted to any of these forums.

5.2.1.3. *Learning Fractions – Posted on 8 May 2006*

This folder features a video on learning fractions in Grades 5 and 6 made by Rudy Candela of Winston Churchill Public School. The video is in 4 parts, with links opening in Windows media player. The folder also contains a document outlining what Rudy had done, and a discussion forum where participants can post their reactions to the video. The forum contains one question to Rudy Candela about his grouping practices.

5.2.1.4. *Boys' Literacy Video Peter Brennan – Posted on 3 March 2006*

A new thread was started in the Literacy folder, inviting participants to discuss Peter Brennan's video on *Boys' Literacy*. No responses have been contributed to this thread.

5.2.2 Ideas

5.2.2.1. First Steps Writing Continuum – Posted on 3 March 2006

This folder offers Barb Skrupski's (Valleyview Public) PowerPoint presentation on First Steps Writing continuum based on *Education for All*. The folder contains link to the presentation, as well as a discussion forum for participants' comments and responses to the presentation. No responses have been posted in the forum.

5.2.2.2. The Learning Carpet – Posted on 3 March 2006

In this folder a presentation of the Learning Carpet teaching strategies in mathematics is posted that was carried out by Dan Celetti, Special Assignment Teacher with the Algoma District School Board Elementary Program Team. The folder contains links to the presentation, and a paper explaining the video and outlining the profile of the video. A discussion forum contains 5 responses, 3 related to purchasing the carpet, 1 in response to the video, and 1 referring participants to a website as an additional resource.

5.2.2.3. General Ideas and Resources for Sharing > Sharing of professional activities – Posted on 17 February 2006

A document outlining the sharing of professional activities activity is posted in three formats (.pdf, .rtf, and .doc) for participants' use.

5.3 Videoconferences

5.3.1 Education for All

This conference took place at two different times, at 9:30 a.m. and at 3:30 pm on February 23, 2006 event. The conference focused on the November-January activities. The following schools participated in the videoconference: Alliance St. Joseph, Winston Churchill Public School, St. Joseph Catholic School, St. Mary Catholic School, and Mt. Forest. Participants provided reports on the activities they undertook in November-January based on *Education for All*, including the discussion of Barb Skrupski's presentation. Then, a discussion of professional sharing focused on how to facilitate the sharing through the Learning Connections online portal. The professional books/resources section of the videoconference focused on sharing resources related to children's literature and how to use calculators. Finally, book study was discussed with a focus on particular suggestions for resources for book study, and the currently available resources (such as Peter Brennan's video). Difficulties with sound were experienced by one of the participating schools during the 9:30 am videoconference.

5.3.2 Book study

The book study activity was a structured mini-course designed and moderated by Robert Lebens. The activity was based on Stigler and Hiebert's book *The Teaching Gap* and focused on lesson study. This activity ran from February to April. The participants were invited to carry out a series

of activities around the book spread over the course of seven weeks, culminating in a closing videoconference. The portal features a general description of the project, as well as folders with weekly activities posted by the moderator. Each folder contains activities that participants are invited to carry out, as well as discussion forums where various aspects of literacy and numeracy instruction in relation to the book can be discussed. The level of participation in the discussions varied from 0 to 3 replies.

5.4 Francophone events

The Francophone portal offers an independent space for activities and discussion, and therefore will be analysed separately. In order to facilitate activities within the French portal, the Learning Connections project gave it a new moderator, Rita Conley, in the winter of 2006.

The following events took place, however they were done outside of the French Learning Connections portal.

5.4.1 Videoconferences

- On January 20, 2006 a videoconference with the writer Alexandre Carrièrele was webcasted.
- On April 10, 2006 an initial videoconference for all participants in Learning Connections and ABEL projects took place.
- On April 18, 2006 and May 2, 2006 two videoconferences were organized between three French boards and the Learning Connections portal facilitator Rita Conley.
- On June 12, 2006 a videoconference was held with students, teachers and principals of all 3 schools. Students began by asking questions of each other about what they would like to know about their region. After this, the students were to develop a publicity pamphlet about their region to share with the students from the other schools.
- On June 21, 2006 a follow-up videoconference was held with students, teachers, and principals of all 3 schools. They presented and shared their publicity pamphlets.

5.4.2 En Français forum

Portal Home > Workspaces > En français Workspace > En Français Forum > Visio-conférence du 20 janvier – Posted on January 20, 2006.

- This thread is devoted to the discussion of the videoconference of January 20, where two principals discuss technical difficulties with the videoconference and investigate possibilities for another videoconference.

Portal Home > Workspaces > En français Workspace > En Français Forum > Vos besoins – Posted on March 20, 2006

- This thread was started by the French moderator Rita Conley. In this thread she invites the participants to post their questions and concerns, as well as suggestions on how to make a more regular use of the portal. No replies were posted.

5.5 Portal suggestions and challenges

In conclusion, a few comments regarding the Learning Connections portal will be made that describe the improvements implemented in the portal and challenges that the portal is facing.

The portal interface was enhanced during the second half of Phase 2: the design now includes an easy-to-use calendar; drop-down menus have replaced the navigation tabs, which makes the portal less cluttered and easier to navigate; and new graphics have been added.

New functions have been added to the portal as well. First, a search function allows participants to find information and resources that are of relevance to them. In order to use the function, participants type the key words in the search bar; they can search all resources or limit their search by choosing a relevant tab in the dropdown menu. Second, an email notification has been introduced. Participants set the parameters of notification, identifying the areas that are of interest to them. When a new event is posted in the area which they identified as relevant, an email notification is sent to them. The notifications can be sent daily or weekly, depending on participants' preferences. This function allows participants to keep easier track of new items in the portal.

At the deeper level of structure, however, the content remains very much embedded, which might create problems of access, and discourage first-time participants from active participation. For example in a bulletin for extending the deadline for the Partner Sharing activity, participants are told to "Go to the Partner Sharing Activity in Activities section of the Community Professional Sharing page." If participants find this activity—and the menus to find this are not obvious because the link names used in this direction are not precise—they encounter a long page in English followed by a French translation. They need to scroll to the bottom of this page to find the link to the discussion forum on the topic. The actual portal path is Portal Home > Workspaces > Professional Development Workspace - Activities > Partner Strategy Sharing Activity > Partner Discussions on Literacy and Numeracy Strategies. Additionally, resources are posted in various parts of the online portal, for instance some links to the webcasts are available from the calendar, others from the home page, yet others from the PD Connections. This makes accessing resources somewhat complicated. A system of flagging the new threads or threads with new postings in them was introduced. This makes the navigation easier, since participants can see which postings/threads they have not yet accessed, and focus on those.

The Learning Connections portal posted three resources created by the participants of the project themselves, in particular a video on learning fractions, a video on using the learning carpet, and a PowerPoint presentation on the First Steps Writing. This demonstrates greater involvement than last school term of the community participants in the professional sharing activities, and enriches the experience of professional sharing by resources provided from within the community.

As noted, a facilitator was assigned to monitor the activities of the French portal, and her participation is visible in the portal.

It should be noted that participation is still quite low as evidenced by the paucity of responses to activities. While a limited number of community members continue to demonstrate keen interest

in the online activities and post their responses in forums, the majority do not productively participate in the portal's online activities.

A new initiative around partner sharing was introduced that engaged some project participants into a productive collaboration. However, this collaboration was done outside of the portal and there is a minimal record of this collaboration that other project participants can access.

6. Summary and Recommendations

After a tenuous start in the fall of 2005, the first six months of 2006 saw Learning Connections gain maturity and momentum. The number of professional learning activities offered by the project has increased, awareness about the goals and objectives of the project among community members is building, the portal design was improved, and sharing across the community has begun. Moreover, the funding uncertainties and role ambiguities were resolved for Phases Two and Three, and online facilitators were hired, including a Francophone facilitator/translator. These improvements, together with the expansion of the community to include more teachers from the same districts, bode well for a successful Phase Three. Nevertheless, some areas of the project still need attention if it is to realize its full potential. Before addressing our recommendations for improvements, however, we believe it would be instructive to consider some of the lessons learned during the first year of the project.

6.1 *Lessons learned*

Learning Connections was conceived of and implemented during a time of change and growth at the Literacy and Numeracy Secretariat: new SAOs were being hired, roles and responsibilities were being (re)defined, and other new projects were being initiated by the Secretariat. The project was not intended to be one like other Secretariat projects whereby the Secretariat funds the project and monitors it as a critical friend. Instead, the initial understanding was that SAOs would take an active role in content development and ongoing delivery. This was set out in the original proposal for the project. Unfortunately, the Secretariat was unable to assume this role resulting in misunderstanding between project management and the Secretariat, which led to delays and uncertainty in project implementation. The lesson to be learned from this experience is to realize that projects having the complexity of Learning Connections require considerable time for planning: as one SAO said, the project probably began about a year too early. At the same time there needs to be clearly delineated lines of communication between one or two designated Secretariat managers and the Learning Connections management, so that any confusion in roles and responsibilities can be cleared up immediately. Additionally, one cannot assume that a project management committee can be assembled and function effectively without written terms of reference and clearly defined roles for all members, items which have been lacking.

One consequence of the haste with which the Learning Connections was implemented was that initial “buy-in” from school districts and their staff was insufficient. The result has been relatively weak participation by the community. Even though all districts agreed to participate, much more work needed to be done within districts to ensure that all of those involved, including principals and teachers, were aware of the commitment that was being expected. Project managers and some SAOs did make visits to all schools during the fall of 2005 to explain the program, but at that point the project had already begun. Ideally, the project should have been structured so that these visits were made in the preceding spring. By doing that schools and districts would have had the time to more fully consider whether they wanted to be part of Learning Connections and they would have had time to shape their own professional

development plans and priorities so that they could take best advantage of the Learning Connections program. Project planners could also have obtained a better understanding of the districts' needs at that point which could have shaped project design. Therefore, another lesson learned from the Learning Connections experience is that much work needs to be done at the grassroots level in districts to obtain their commitment and understand their needs before beginning a project of this nature.

A final lesson learned concerns complexity of the portal. Even though significant improvements have been made to it, the portal is still relatively difficult to navigate and to locate whatever might be sought. The fear is that participants may not find what they want in the portal, be intimidated, and never bother to return. Since the primary goal of Learning Connections is to facilitate dialog among the community, a better design strategy may have been to feature front and centre a threaded discussion forum rather than placing separate discussion folders under activities. Then as the need arose additional separate discussion groups could have been created and the design could have evolved according to demands and requirements of the community. Therefore, we believe that other projects that use a portal to facilitate community-building would best be advised to keep the interface very simple and straightforward at the onset and allow it to grow as the need arises.

6.2 Recommendations

We offer the recommendations below to help Learning Connections develop into a stronger and more vibrant learning community in Phase Three.

Recommendation 1: Facilitate information sessions for new participants in Phase Three.

In Phase 3 the project will be opened to any and all teachers in the nine participating school districts that boards wish to involve. For these new teachers to participate effectively they have to be oriented to the project. Ideally, the orientation should be facilitated by the current participating school in each district so that they can share their experiences and understandings of the project. However, given all of the competing demands in schools at the beginning of the school year, they may not have the capacity to organize information sessions at that time. Therefore, we recommend that the Learning Connections management contact districts to find out schools' plans for these sessions and to offer their assistance in facilitating them. Learning Connections might organize a videoconference and/or set up a special Question and Answer discussion forum for new teachers as part this initiative.

Recommendation 2: Assist schools in initiating school-to-school projects.

Interest has been expressed by some participants to use the Learning Connections infrastructure to initiate projects that link classrooms in different schools. This is a component of the ABEL Program, upon which Learning Connections is modeled, that has been very successful. We believe that the time is now opportune to help teachers initiate this kind of project in Phase Three. Since this will be a new experience for teachers, project management will necessarily need to be proactive in suggesting to

teachers how to go about this and recommending topics or projects with which to begin. Additionally, management might wish to organize a videoconference on this topic. An added advantage of implementing this recommendation may be that greater use is made of the project portal.

Recommendation 3: Maintain an ongoing dialogue with supervisory officers and principals.

Without the solid support of supervisory officers and principals for the project, success will be difficult to achieve. Therefore, we recommend that regular discussions be held with them to address issues and concerns and to ensure that the project is meeting their needs. Telephone conference calls may be the most practical way of meeting this recommendation because not all participants will have convenient access to the technology to do it via videoconferencing. We recommend that these conferences be held every month or two.

Recommendation 4: Plan Phase Three to meet teacher needs identified in this report.

In section 3 of this report, we suggested areas where teachers need additional support. For example, numeracy teachers need to know how to use a variety of mathematics tools and allow students to choose their own tool, learn to make connections to other strands of the mathematics curriculum, teach different representations of mathematical concepts, make student mathematics work more visible on classroom walls, and have students communicate their mathematical understandings to one another. For literacy, teachers need help incorporating gender-sensitive practices into their teaching, using media and technological tools in the classroom, promoting and supporting peer-to-peer interaction, and using appropriate assessment techniques. Although these needs were identified by snapshot classroom observations, they are likely fairly representative of other teachers since the teachers were nominated by their principals to exemplify pedagogical practices at their schools. Therefore, we suggest that Phase Three project activities be structured so as to address as many of these topics as possible.

Recommendation 5: Continue to improve the project portal by simplifying access to key material.

Despite the considerable enhancements made to the portal during Phase Two, the portal still needs improvement. The developers must remember that many of the community members have only rudimentary computer skills. For example, in the 2005 Summer Institute survey, 40% of respondents rated their computer skills as “novice” or “basic.” Casual observation of 2006 Summer Institute participants using computers to access the Learning Connections portal and complete an online survey reinforced this as we noticed that there are participants who are uncertain about how to enter the Learning Connections web address into Internet Explorer. As pointed out in section 5.5, some content is still difficult to access, discussion forums are not always easy to locate, some webcasts link from the calendar while others do not, and directions are often confusing. Therefore, we recommend that developers continue to work at simplifying access to key materials in the portal. They may want to do basic usability studies with several participants to see which

areas need improvements. This might entail inviting several teachers to York University and observing them navigate or using a remote recording tool with the teacher's permission.

Recommendation 6. The Literacy and Numeracy Secretariat should consider supporting the project an additional year beyond Phase Three.

Online community building takes considerable time—more time than face-to-face communities. ABEL, the parent project of Learning Connections, for example did not develop sufficient momentum until well into its second year even though the teachers in it for the most part were proficient computer users. Due to the many start up difficulties and delays in Phase Two and the relatively low participation rate, we believe that the concept of having an online community to support teacher professional development for literacy and numeracy will not have been properly assessed by the end of Phase Three. Moreover, it may be difficult to garner sufficient commitment from the teachers who are new to the project in Phase Three if they know it will not last longer than the 2006-07 school year. Therefore, we recommend that the Literacy and Numeracy Secretariat seriously consider financially supporting Learning Connections an additional year beyond Phase Three. The support need not be for acquiring new technology, but for operating expenses. At the same time school districts should be asked to provide some support for the project as well to demonstrate their commitment. This support may be through contribution of technology to participating schools or covering the costs of supply teachers.

7. References

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Appendix: Original Project Proposal

Literacy and Numeracy Connections: A Classroom-based Professional Development Three-year Pilot Program

A key component of the **Literacy and Numeracy Connections Pilot** is a professional development program aimed at developing pedagogical and leadership skills for literacy-lead teachers, principals/vice-principals in schools, and district supervisory officers. The Advanced Broadband Enabled Learning (ABEL) program has been invited by the Secretariat to pilot a classroom-based professional development project for K-6 literacy and numeracy teachers in Ontario. The ABEL program housed at York University, accesses research and innovation expertise and resources from the university, along with program leadership that is provided by York Region District School Board (YRDSB), the lead school district. The ABEL Program, which has had great success in developing, testing and refining job-embedded professional development and training for teachers and school leaders in two provinces, is prepared to provide a pilot professional development program that is classroom based, customized to meet goals of the Literacy and Numeracy Secretariat and builds on the strengths of participating individual regions and districts. The pilot will be based on a Centres of Excellence model and will develop effective literacy and numeracy practices and programs in select schools in Ontario, and then replicate and scale the model to broaden implementation across the districts and the province. As well these Centres of Excellence will provide the Secretariat and the province with opportunities to showcase and demonstrate innovation in literacy and numeracy teaching and learning.

Literacy and Numeracy Connections:

Consistent with best practice for effective professional development and learning the **Literacy and Numeracy Connections Pilot** will be developed and delivered based on the following principles: focused on literacies; learning-centred; technology-enhanced; flexible and modular; job-embedded; participant driven design; collaborative; site-based teamwork and leadership; integrated development of pedagogy and leadership; and, research-based implementation.

The **Literacy and Numeracy Connections** participants are the leadership cadre that will be the agents of change and sustain school improvement in literacy and numeracy in seven (7) school districts across the province. Working with teachers in the field, the **Literacy and Numeracy Connections** participants in this program will develop a Centres of Excellence model within their School Districts. This model will demonstrate excellence in literacy and numeracy teaching and learning, and will be scalable and replicable across the province. The participants in the pilot include:

- Board-wide trainers for literacy and numeracy in the junior panel, grades 4,5 and 6, and District Consultants in seven (7) school districts in Ontario.
- Teams of designated Foundation or Literacy Lead teachers in an elementary school(s) in seven (7) school districts in Ontario
- Principals or Vice-Principals in elementary school(s) in seven (7) school districts in Ontario
- Supervisory Officers (Program/Curriculum) from seven (7) school districts in Ontario
- Members of the Secretariat, OKNL, ABEL program and the Ministry of Education

The **Literacy and Numeracy Connections Pilot** is comprised of four (4) components. The pilot program participants will have access to a **collaborative learning community**, a **professional development and leadership program**, **implementation strategies** that support capacity building and a **research and evaluation** component that will inform progress.

Literacy and Numeracy Connections Pilot Components:

1. Within a **collaborative literacy and numeracy learning community** of effective practice the participants in the **Literacy and Numeracy Connections Pilot Program** will use broadband networks and ICT applications to work locally as well as across geographical distances to access professional development programs, work with experts and mentors, leverage resources and expertise and demonstrate effective literacy and numeracy practice. The **literacy and numeracy learning community** will seamlessly bring together resources, programs, applications and expertise for the participants. It will also tie existing local resources where appropriate into context and allow the Centre's of Excellence to leverage economies of scale and benefit from the value of shared assets. As well the **literacy and numeracy learning community** will have the advantage of using the existing ABEL infrastructure and relationships, and it will enjoy access to a wide variety of tools, applications and implementation expertise. These include:
 - a. Learning Management Systems (e.g. WebCT, Moodle, OKNL Ministry Licensed LMS)
 - b. Web-development applications (e.g. IO, Komposer, Macromedia Dreamweaver)
 - c. Interactive web-based curricular content (e.g. TVO resources such as e-workshop, Curriculum Resource Bank, OKNL Learning Object Repository, Literacy and Numeracy web content etc..)
 - d. Collaborative technologies (e.g. chat, threaded discussion forums, white board technologies)
 - e. Videoconferencing technologies allowing point-to-point and multipoint connections (e.g. H323 technologies, VSee, Breeze etc...)
 - f. Other technologies and applications identified throughout the pilot

The use of these technologies together with the program developed by the Secretariat's Student Achievement Officers will create a learning culture in which District-wide trainers, consultants, literacy and numeracy lead-teachers, principals and superintendents in seven (7) school districts will work collaboratively to share (create, reuse, re-purpose) learning activities. Within this online community, content and ideas will be shared and developed, mentoring opportunities will be available, existing resources will be leveraged and extended across jurisdictions, and capacity building at the site and across the province will be possible. Specifically participants will:

- reform their pedagogy through collaboration with peers and expert mentors;
- expand the reach and access of professional development across the districts;
- build bridges between institutions and others; and
- act as catalysts for change by providing leadership, and influencing policies and priorities locally and provincially

2. The second component is the professional development program. This program is informed by the Secretariat's mandate, and is aligned with the identified strengths and strategic goals of the participating school districts. It is participant driven in its design, job-embedded, reflective, and it includes a mentoring element. The program is comprised of two aspects, the mandatory **foundation program** and the **consolidation program**. The **foundation program** identifies the core pedagogical competencies required to effectively deliver and lead literacy and numeracy training in the schools and the districts, along with the necessary ICT knowledge and skill required to work in an interactive collaborative environment. This program will be informed by the Ministry's Junior literacy and numeracy training roll-out, developed by the Student Achievement Officers and the ABEL Program consultant. The Student Achievement Officers will identify the pedagogical repertoire and the literacy and numeracy content component of the program, and the ABEL team will identify and support the aspects of the program that can be enhanced and enriched by the use of the technology and applications. This professional learning program will also include a focus on leadership; leading school teams; building site capacity; and, instructional leadership strategies. In the **consolidation program** District-wide trainers, District consultants, lead teachers, principals and superintendents assume responsibility for collaboratively developing and implementing curriculum that supports literacy and numeracy goals, while being supported by both the Secretariat and the ABEL program. The leadership aspect of the consolidation program will support replicability and scalability of the literacy and numeracy Centres of Excellence model across the Districts. The professional development program will use a variety of strategies that use ICT to deliver and support literacy and numeracy goals, including a combination of large group interactive videoconference events that focus on key themes, and small group interactive videoconferences to brainstorm, plan learning events, or coordinate curriculum. The program will practice blended learning approaches for teacher professional development by conducting face-to-face site and large group sessions, and individual training

sessions that may be enhanced by synchronous or asynchronous technologies. Also it is expected that for certain activities in the program, such as the introductory face-to-face sessions and summer institutes that site-based school and district teams comprising District-wide trainers, District consultants, lead teachers, school administrators and supervisory officers will participate together.

3. Third is an implementation strategy that focuses attention on change management, motivating people to become change agents, and creating an environment that supports risk taking. This strategy creates an empowering culture that allows teachers, principals and superintendents to take responsibility for their own learning and professional growth, and for developing site and system capacity building. The implementation strategy pays specific attention to an iterative quality control management method of design, develop, deliver, and evaluate. The **Literacy and Numeracy Connections pilot** will employ this approach to guide the work. This strategy is directed at building a vibrant learning community that can overcome the challenges of jurisdiction and geographical distance.
4. The final component is a formative research and evaluative strategy that seeks to inform and shape the pilot as it evolves. A research team consisting of researchers from York University will act as an integral part of the **Literacy and Numeracy Connections pilot**. The team will employ a variety of research methods throughout the pilot, such as detailed classroom case studies, teacher surveys, server log file analyses, document collection, interviews with key informants, and student focus group interviews and surveys.

The Literacy and Numeracy Connections Pilot Implementation:

Changing professional practice does not happen overnight. As international research has pointed out, changing school cultures and teacher practice is complex and takes several years. To support meaningful and sustained professional growth and the transformation of pedagogical and leadership skills required by an effective **Literacy and Numeracy Connections** leadership cadre, the cohort of participants will remain in the pilot over a three-year period. During the three years the pilot will provide a developmental continuum with three phases each addressing pedagogical and leadership themes relevant for participants in classrooms, schools, and districts. These will include an introductory team-building summer institute that initiates the pilot and launches a program that focuses on developing literacy and numeracy capacity building with District-wide trainers (in the Junior divisions) and District consultants. In year 2 as the Centres of Excellence model progresses the participants further develop their collaborative learning community and focus on literacy and numeracy programs that demonstrate effective practice and improved student achievement. In year 3 the pilot will inform the essentials of leadership growth and district capacity building to ensure sustainability. As well, Years 2 and 3 continue to include summer institutes that support foundation and consolidation programs, and contribute to collaboration and building the literacy and numeracy learning community. Throughout the pilot, research-based effective and best practice will inform future direction, replicability and scalability for wide-scale implementation, locally and for other school districts.

Key resource people for the program (presenters, instructional leaders, mentors) will be drawn from regional school personnel, from the Secretariat's Student Achievement Officer staff, as well as experts well known provincially, nationally and internationally.

The ABEL Team from York University will work with the Secretariat to define and develop the phases and implementation strategies for the **Literacy and Numeracy Connections pilot** program and align them with provincial goals and other Ministry program components, such as OKNL's e-Learning strategy and TVO resources.

We envisage a plan that unfolds and produces results over three (3) years, from February 2005 to August 2007. The pilot will focus on building capacity for quality instruction and assessment strategies that will contribute to increasing student achievement. It will include introductory regional face-to-face sessions, a blend of regional face-to-face and online professional learning activities, mentoring support, summer institutes, and program evaluation and research. As well it will develop a culture of learning, build and share knowledge among participants and within schools and school districts, manage change and plan for local and provincial coherence.

The Research Team as part of the research and evaluation component of the pilot program and in consultation with the Secretariat, will design the methodology and data collection criteria for measuring success that will enable continual pilot improvement cycles. As well the documented results of the pilot will prove the direction and inform the process for full-scale implementation of the program.

The Secretariat together with the ABEL team will provide direction for the **Literacy and Numeracy Connections Pilot Program**. ABEL Program office will manage the pilot in partnership with the Secretariat. Janet Murphy, ABEL Program manager will be responsible for:

- overall ICT design of the pilot in consultation with the Secretariat
- management of the contract and relationships between YRDSB and the Secretariat
- expediting and modifying current ABEL resources for the project

A full time **Literacy and Numeracy Connections Pilot Project** Manager will be responsible for operational management of the pilot.

Deliverables:

The **Literacy and Numeracy Connections Pilot** will:

- transform District-wide trainer, consultant and teacher practice with respect to pedagogy, collaboration with peers and expert mentors;
- support student achievement through innovative classroom practice;
- develop an adaptive collaborative classroom-based professional development learning model and program, aligned with needs, learning styles, expectations and experiences.
- build bridges between institutions and others leveraging resources and expertise;
- act as catalyst for change by providing literacy and numeracy leadership locally, regionally and provincially;
- overcome inter-institutional barriers and provincial barriers (e.g. access to research and collaborative delivery of teacher education);
- compile a database of **Literacy and Numeracy Connections** resources, activities and exemplars of effective best practice.
- provide yearly summer institutes for participating school districts
- provide research reports evaluating success and benchmarking program development
- recommend the elements and conditions required for full-scale implementation of the Literacy and Numeracy Connections program

Literacy and Numeracy Connections Workplan – April – August 2005

Activity	Responsibility	Timeline
Approve workplan and implementation strategy	Secretariat and ABEL	April 8
Identify School Districts	Secretariat	April 8
Identify scope of Literacy and Numeracy Pilot program	Secretariat – pedagogy ABEL – technical knowledge and skills	April 30
Develop the research plan and data collection criteria	Secretariat, ABEL and Research team	April 30
Prepare communication to selected school district personnel	Secretariat and ABEL	April 30
Identify web presence and develop web interface	Secretariat and ABEL	April 30

Begin to develop the Literacy and Numeracy Connections community (Learning Platform)	Secretariat and ABEL	May 12
Identify FOIP rules and gain necessary approvals (ethics review) to conduct research the pilot	Research team	May 12
Communications deployed	Secretariat and ABEL	May 12
School Districts select District-wide trainers, consultants and lead teachers	Participating School Districts	May 27
Develop Research methodology	Secretariat, ABEL and Research Team	May 27
Develop Summer Institute program	Secretariat and ABEL	May 27
Visit sites	Secretariat and ABEL	June 8
Determine technical requirements	ABEL	June 8
Deploy technology and test environment	ABEL	June 24
Consolidate Summer Institute program	Secretariat and ABEL	June 24
Plan, Develop and Publish the Literacy and Numeracy Connections Fall 2005 program	Secretariat and ABEL	Summer 2005
Deliver Summer Institute	Secretariat and ABEL	August 2005

Workplans for the Literacy and Numeracy Connections pilot for Year 2 and 3 will be developed with the Secretariat.