E D M O N T O N P U B L I C S C H O O L S

December 9, 2003

TO: Board of Trustees

FROM: A. McBeath, Superintendent of Schools

SUBJECT: Supporting Teaching and Learning through Advanced Broadband Enabled Learning (ABEL)

ORIGINATOR: A. Habinski, Executive Director, School and District Services

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INFORMATION

The purpose of this report is to share with trustees information on how the *Advanced Broadband Enabled Learning* (ABEL) project is supporting teaching and learning within the three district sites. The report corresponds with a presentation to the Board by principals and teachers from J. Percy Page, Centre High and Victoria School for Performing and Visual Arts.

Focus on Supporting Teaching and Learning

The ABEL initiative strongly supports *Focus on Supporting Teaching and Learning*. ABEL participants include ILT members that make connections between the two initiatives to share research/resources/ideas. More specifically, district teachers and administrators within ABEL are meeting the following Key Expectations:

Expectation #2: Developing professional collaboration teams to improve teaching and learning

- Each school has a professional collaboration team of 4 to 6 teachers and an administrator that are networking around instructional issues and strategies within and across the three schools.
- These teams are focused on improving teaching and learning. They meet regularly to discuss and compare student work/results for the purpose of assessing their own and students' performance. In addition, teams from the three schools participate in online opportunities for creating/sharing professional development work via the ABEL online learning environment.

Expectation #3: Identifying, learning and using effective research-based teaching practices

- ABEL staff members are participating in job-embedded professional development that involves selecting effective research-based methods and sharing best practices that include modeling, and demonstrations by content coaches and through the use of videoconferencing classroom visitations. Research indicates that job-embedded, sustained professional development is the best model for a positive impact on the classroom.

I'm encouraged by the support that I have been given and have enjoyed the opportunity to collaborate with teachers from other schools. Expanding on this work is something that I look forward to. I also look forward to developing my expertise in technology, and applying it in new ways in my classroom. *-EPS Teacher and ILT Leader*

Expectation #4: Implementing a targeted PD plan that builds expertise in selected best practice.

- ABEL Teachers have targeted areas within each subject (i.e. improving student achievement in Pure Math 30 through collaborative problem solving). They build expertise by collaborating with champion teachers from other schools and with researchers/experts from universities.

The ABEL Project

ABEL began September 2002 and is funded until January 2004 with a possibility of extension. The project is funded through the CANARIE learning program (an agency of Industry Canada) and project partners. The initiative involves a learning community of over 300 educators in K-12 and post secondary institutions in Ontario and Alberta. Educational partners include York University, University of Alberta, University of Calgary (Galileo Educational Network), Seneca Collage, Toronto District School Board, York Region District School Board, The Banff Centre and Edmonton Public Schools. In addition to the three participating schools, the district is providing a leadership role in the area of instructional design.

The Advanced Broadband Enabled Learning (ABEL) Project is a technology-mediated professional learning program that engages a new culture for teaching and learning through the use of broadband networks and information communications technology.

The ABEL model is comprised of three main components:

1. **Online Learning Environment** *(*www.abelearn.ca*)*
   The online environment facilitates learning by connecting students and teachers to research, tools and inquiry-based collaborative projects. Teachers, students and experts are part of a learning community that exchanges resources, ideas and expertise anywhere and at anytime. The online environment keeps people and institutions connected during, and between, professional development activities that occur via videoconferencing. Educators use the online environment to share resources, participate in discussions and plan/book videoconferences. The

environment combines broadband applications (videoconferencing, video streaming) with internet resources (collections, management systems).

2. **Professional Learning Program**
   The ABEL professional development program is job-embedded, accredited by the post-secondary partners, reflective, and includes a mentoring component. The program has the teacher/faculty working collaboratively with students in the classroom while engaged in professional learning. The program is focused on improving student learning.

3. **Research and Evaluation**
   This component of ABEL measures the success of the implementation, the impact on the teacher/faculty and student, and the impact of the institutional change.

First Year Results

An external evaluation team from York University monitored the year one implementation and results of ABEL. The team summarized that,

> ***Teachers have begun implementing broadband technologies in their practice in ways that are breaking through the bounds of traditional pedagogies, offering their students more authentic and engaging learning experiences.*** *ABEL First Interim Research Report, July 2003*

The districts' experience within ABEL supports the Interim Research Report. District teachers/ administrators are using the model to bring new resources and expertise into their classrooms as well as to collaborate and share best practice with others. Our teachers express enthusiasm in being part of a technology-mediated educational community.

> ***We are changing schools. We are changing education as it can be delivered to our students –in a way that is more meaningful and relevant. That is an amazing task.***
> *-EPS Teacher*

EPS participants receive the job-embedded support that they need from highly qualified experts/researchers for professional learning and technology integration. This results in a greater likelihood that new resources, research-based methods and new technologies will be meaningfully implemented in the classroom.

Student Achievement

EPS teachers report a positive impact on student achievement as a result of their ABEL work. A math department head reported that she "got the best student work and results from pure math 30 students" that she has ever witnessed in her career. Her students' diploma exam results were 7% higher then previous years. She accredits the high achievement results to improved student engagement with math as a result of her collaboration with other teachers and researchers from Galileo, bringing in Mathematicians through videoconferencing from the U of A and U of C, and the use of quality digital learning objects developed through ABEL.

> ***Student learning is positively impacted as they experience a real-world connection within the subject area. Students report a higher level of engagement with the subject matter and an increased understanding.*** *–EPS Teacher*

> ***This type of discussion forum where the topic is actually relevant is great. And it allows me to communicate with students from other schools. I think that ABEL is a great way to learn. Sometimes you need someone else to explain something to you a different way.*** *-Math 30 Student*

Our principals are pleased with the collaboration opportunities and learning advancements that have taken place within our three ABEL sites. In APPENDIX A the three EPS schools share their thoughts and experiences in using the ABEL model to support teaching and learning.

Public Recognition

ABEL participants have been invited to speak at several local, national and international conferences.

> ***ABEL is gaining recognition across Canada for its innovation in teaching and learning. The strong collaboration among ABEL teachers, school administrators, researchers and private sector is a model for Canadian education. ABEL is branded as Canada's #1 source for Broadband Enabled Learning.*** *Stan Shapson, VP Research and Innovation, York University*

ABEL has received awards of excellence:

- Showcase Ontario Award for Excellence in Working Together, September 2003
- The Learning Partnership Technology Innovation Award, June 2003
- SchoolNet Network of Innovative Schools Award to J. Percy Page, October 2003

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APPENDIX I – EPS School Statements

Appendix I

EPS SCHOOL STATEMENTS

A. Victoria School for Performing and Visual Arts

The ABEL Project commenced at Victoria School of Performing and Visual Arts in September 2002, and has acted as a catalyst for collaboration and professional development within the school. From the outset, six staff members were willing participants in the project which integrates broadband technology with learning and best teaching practices. Staff were selected from the following areas: arts, social sciences, sciences, design and new media.

The opportunity for interdisciplinary work and team building has been unique. The project has brought staff together to work on integrated projects and cross-curricula ventures with students. It has also been instrumental in providing professional growth for teachers in the area of technology and communication. The use of videoconferencing and an array of leading edge broadband online learning tools has benefited staff and students alike.

The six team members at Victoria School have participated in online projects with other schools and external agencies. This work has included collaborative ventures with teachers and students in Toronto and in York Region. One highlight was a live link up between Victoria School and the Ontario Science Centre on a DNA experiment that is part of the Biology 30 curriculum.

As part of a larger group in the online community, Victoria staff have also worked with staff at York University, the University of Alberta, and the Banff Centre, as well as other partners in the project. More information can be found at http://www.abelearn.ca/

The team at Victoria School looks forward to further involvement in ABEL depending on support and funding allocations from various stakeholders. We would particularly like to thank Karen Andrews and District Technology for their support and leadership in this project. In addition, the teaching staff would also like to recognize the ongoing and full support of Principal Ingrid Neitsch with this exciting leading-edge venture. (Andrew Gambier, Lead Teacher, ABEL Project, Victoria School of Performing and Visual Arts)

B. Centre High Campus (CHC)

> ***ABEL is learning at the speed of light. Broadband collaboration for teachers and learning events for students provides a 21st Century opportunity for classrooms and lessons that were designed in the 20th Century or earlier.***
> *– Glenn Iriye, CHC ABEL Site Coordinator*

ABEL was showcased at an event at J Percy Page in June of 2002. The framework of collaborative planning and pushing the limits of both geography and technology were too tantalizing a prospect for CHC staff. As a result, three teaching staff volunteered to participate in the summer training session held at Seneca College in August of 2002.

Our expectation was, and continues to be simple: incorporate the use of technology to enhance student learning. To this end, we have used videoconferences as planning sessions for teachers and as learning events for students. Participation in ABEL has allowed us to draw upon expertise from educators to address specific topics and general procedures in subject areas. We have sought out technical advice from one of the best technical support teams available in Canada.

ABEL has supported student concept development through making leading figures available to students, where students might not otherwise have had the opportunity to listen to or question Canada's representative for peace to the United Nations, or to a well respected research doctor to examine and discuss the implications of SARS and BSE.

Multidisciplinary planning, implementing, and evaluation of ABEL events have strengthened professional development of the staff involved. For example, Rohit Kapoor, a math teacher, become involved in the planning, implementation, and evaluation of Sam Filice's social studies project dedicated to peace education. From his involvement with this event, Mr. Kapoor was able to identify implications for his math students in incorporating relevant math skills with current events.

ABEL has permitted the Centre High team to focus on the learning process and dwell upon the implications of the ABEL elements to be incorporated into our "regular" lessons. For example, October's large group videoconference posed a basic question of learning: What are five characteristics of an engaging, interactive classroom? The teachers, researchers, and administrators ABEL sites were provided with readings and time to share their ideas at their site prior to the conference. The large group videoconference then provided the opportunity to further examine the question and to see if the characteristics are present or planned for during ABEL videoconference events for students. Such opportunities allow us to thoughtfully reflect upon our experiences and share them in a meaningful manner.

Brings life to the curriculum. *– Stacy, CHC student*
…brings meaning to what I'm studying. *– Kyle, CHC student*
Neat! This is really different. – *Sean, CHC student*

Centre High Campus is supportive of all the efforts of the district to ensure our students and staff have access to leading edge opportunities to support learning. CHC is also appreciative of the work of Karen Andrews, ABEL Project Coordinator, and EPS district technology for making an initiative such as this a success. Across the city and across provincial boundaries, ABEL has proven to be a worthwhile endeavor. (Ray Cimolini, Principal, Centre High Campus)

C. J. Percy Page School

J. Percy Page is very proud to have been at the leading edge in the use of broadband connectivity to enrich student learning, as well as to provide meaningful and effective professional development for its teachers. Through our partnership with Shaw Communications and our previous participation in the Learn Canada Project, a number of students and staff, prior to the ABEL Project, had already developed considerable comfort

and expertise with teleconferencing and collaboration over broadband, as well as in using this technology to plan and conduct student project work within different curricular areas.

The teachers at J. Percy jumped at the chance to participate in ABEL and have been heavily involved in the project from the beginning. Karen Andrews is the Learning Lead for the project and there are six J. Percy Page teachers involved in ABEL. The curricular areas include Math, Science, Social Studies, the Arts, and Legal Studies. Throughout the project, these teachers have:

- Participated in a number of videoconferences, where they have been introduced to new technologies, listened to experts, and discussed teaching methodologies with colleagues across the country.
- Developed relationships with project teachers in other schools, shared information with these teachers, and jointly planned and conducted projects or other learning experiences with their students.
- Become familiar with a variety of technology with which to enrich their instruction, including online course creation in WebCT, web page creation, inquiry-based project development in IO, streamed video, electronic learning repositories, and several others.
- Created learning materials and developed strategies which they will be able to continue to use effectively even after the project has ended.

The most powerful result of this has been a significant shift in how both the teachers and the students involved view school, as well as how teachers view professional development. The usual limits of space, time and money are no longer such a problem. The classroom can essentially be extended to anywhere in the world. Students can gain first-hand information from experts, ask questions of them, and discuss important topics with other students anywhere. Both teachers and students can establish "virtual learning communities" that are not restricted by geography. Teachers can help each other to develop their skills, in matters that are of immediate concern or relevance, and in ways that will help them to share their workloads and provide more effective ways for their students to learn. This has the potential to fundamentally change the roles of teachers and students in the learning process. (Geoff Buxton, J. Percy Page ABEL Site Lead, Department Head, Science and Technology)