

## EDMONTON PUBLIC SCHOOLS

February 12, 2008

TO: Board of Trustees

FROM: E. Schmidt, Superintendent of Schools

SUBJECT: Teaching and Learning with Technology

ORIGINATOR: R. MacNeil, Assistant Superintendent

RESOURCE  
STAFF: Glenn Johnson, Terry Korte, Patti Lorentz, Darwin Martin, Mary Michailides, Louise Osland

### INFORMATION

Over the past three years, District Technology has initiated a number of projects designed to research the impact of integrating technology into teaching and learning. The school-based projects are focused on gaining a better understanding of the impact of technology on student engagement, achievement, attendance as well as changes in teacher practice. Some of the projects have been supported by over 1.3 million dollars in grants from Alberta Education, providing schools with matching dollars for new hardware, software, Professional Development (PD) and technical support. Aligned with the work of the Alberta Initiative for School Improvement (AIS) technology projects and other District initiatives, the projects have enabled schools to explore the use of different technologies to support a variety of learners. District Technology has worked in collaboration with several central departments (including Student Achievement, Consulting Services, Purchasing and Contract Services and Facilities) to coordinate the support and services necessary to make the projects successful.

#### **Assistive Technology Projects**

Some of the projects that used a variety of technologies to meet the diverse learning needs of students include:

Teaching and learning with wireless laptops: enhancing how teachers teach, and how students learn with access to laptops in the regular classroom (three schools).

Enhancing literacy and 21<sup>st</sup> century skills for at-risk students with one-to-one computing: targeting at-risk and low-achieving student populations (including First Nations, Métis and Inuit (FNMI) and special needs students) by integrating technology such as laptops and interactive white boards. (seven schools).

Building professional learning communities: connecting teachers with colleagues across the District, Province and beyond through videoconferencing (33 schools).  
Support literacy for all learners with assistive technology: enhancing student writing by using portable word processors (AlphaSmart<sup>®</sup>) in their daily writing

activities (six schools), and using text-to-speech software to assist struggling and English as a Second Language (ESL) readers (three schools).

Teaching with media using interactive white boards: embedding the media-rich online world into classrooms to augment instruction with interactive white boards (80 schools).

### **What have we learned?**

Internal and external research is an integral part of every project. It is through the research findings that we are able to develop best practices that serve to inform future District practice. Findings from the projects include:

1. There was a shift in teaching style *towards* a more student-centered approach. Teachers' beliefs about the effectiveness of technology changed, leading to increased integration of several other types of technology.
2. To realize the potential of using technologies for teaching, teachers relied on collaboration with their peers (from within the school, and within the District) in their planning, accessed different types of PD based on their skill level and learning style, and were motivated to learn.
3. Technology supported *all learners*, but had a particularly positive impact on struggling writers. Students reported enjoying the writing process more, and the quantity and quality of student writing improved.
4. Students were more willing to collaborate and accept feedback from other students and teachers, and were more willing to revise their work.
5. Students were engaged by the technology and teachers reported fewer classroom management issues.
6. Students have become much more self-directed learners and were more aware of their progress.

The research indicates that using a variety of technologies supports teachers in meeting the diverse learning needs of their students. The positive impacts of integrating technology into everyday practice are not only a result of the enthusiasm and effort of teachers, but also a result of a more planned and coordinated approach taken by schools and the District.

It is our belief that EPS is well positioned to move forward with the effective integration of technology into teaching and learning in all schools. Through a planned and coordinated effort of central departments and schools in areas such as planning, PD and sharing of best practices, this goal can be achieved. The services and support that will result from this approach will enable teachers to select and integrate the technology that fits best with their pedagogical style, and will enable schools to plan to use technology that supports school and District goals.

ES:vjm