

EDMONTON PUBLIC SCHOOLS

October 12, 1999

TO: Board of Trustees

FROM: E. Dossdall, Superintendent of Schools

SUBJECT: Broadband Learning Environment

ORIGINATOR: G. Reynolds, Department Head

RESOURCE STAFF: Karen Andrews, Ron Bradley, Avi Habinski, Thalia Hartson,
Glenn Johnson, Pat Redhead, Lisa Wright

INFORMATION

The purpose of this brief report is to share with trustees an initiative the district is involved in that has the potential to enhance the teaching and learning processes by having access to learning resources from across the country. The Communications Research Centre (CRC), an agency of Industry Canada, invited representatives from education, government and corporate sectors from across the country to discuss the feasibility of developing a broadband communication that will link learners from across the country with each other and with the available learning resources. This initiative of a national repository of learning objects in support of Canada's education community is called LearnCanada. The participants included the following public school districts: Avalon East, Newfoundland; Commission Scolaire au Coeur-des-Vallées, Quebec; Kawartha Pine Ridge, Toronto and Ottawa-Carleton, Ontario; and Edmonton, Alberta. Representatives of the provincial governments of Alberta, Ontario, Saskatchewan and New Brunswick were also in attendance. The post-secondary institutions were represented by the University of Calgary, Simon Fraser University, Memorial University of Newfoundland and Northern Alberta Institute of Technology. Companies such as IBM, Shaw communications, TV Ontario and the Open Learning Agency of B.C. represented the private sector. The CRC, National Research Centre (NRC) and SchoolNet (all agencies of Industry Canada) and CANARIE Inc. (a non-profit/government organization that funds initiatives in the area of technology), were also represented in the deliberations.

Some of the objectives of the gathering were to:

- (a) create a high performance cross sector national team to collaborate in the research, development and implementation of K-12 broadband learning applications,
- (b) define the K-12 advanced learning applications to be researched, developed and implemented,
- (c) develop a strategy to connect existing clusters of innovations across Canada in order to avoid duplication and create synergy of effort,
- (d) define a set of tools required for effective collaboration, research and development and
- (e) develop a funding proposal for a broadband learning environment to be submitted to Canarie Inc.

The rationale advanced for the high-speed network is that it will not only provide learners with access to media rich learning material but a platform for exchange of ideas without the limitations of time and place. It was also suggested that the availability of on-demand life long learning for all members of the community would change the way we work and learn together and enhance Canada's position within the competitive environment. It was also recognized that in order to increase our efficiency and effectiveness we need to learn from the experience of each other. This requires the identification and elimination of barriers to collaboration, reduction in duplication and a general shift from a competitive to a collaborative culture among organizations that are responsible for the education of Canadians and those that support this endeavour.

Following extensive deliberation, it was agreed to form a Pan Canadian team to collaborate in the development and implementation of K-12 broadband learning applications. A national portal/repository system was identified as the main application for development that would connect learners to a media rich repository of learning objects. A number of issues will have to be addressed during the development of the proposal. They include the intellectual property rights, security of information, equity in accessibility and mutual gains for all contributors. One of the guiding principles is that in order to sustain collaboration and interdependence every party must receive more than they contribute. In this project, the district is expected to contribute content, pedagogical expertise, access to community of learners, technical expertise and experience in managing WANS and LANS to support teaching and learning. In addition, we will contribute to the development of a Pan-Canadian test bed for research and development of advanced learning applications and make curricular resources developed by the district available to others. The expected gains include advanced learning opportunities for students and staff, access to quality content and services at reduced costs, opportunity to generate revenue for the contribution of content and services, potential access to government funding, access to national best practices and maintaining the leading edge of the use of technology to support teaching and learning.

Karen Andrews, a technology co-ordinator at J. Percy Page, is serving on a national committee that is developing the funding proposal to be submitted to Canarie. She is assisted by a small group of district staff that include Avi Habinski, Pat Redhead, Ron Bradley, Glenn Johnson, Lisa Wright and Thalia Hartson. The group prepared a "business case" for Edmonton Public Schools' involvement in this national project (Appendix D). It clearly identifies that the project supports the mission of Edmonton Public Schools and more specifically the board's priorities to:

- (a) improve student achievement
- (b) enhance high quality teaching and high quality leadership and
- (c) provide a learning environment that fosters continuous learning

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APPENDIX I – Excerpt From: Business Case for Edmonton Public Schools' Participation in the Development of a National Learning Portal – LearnCanada

**Excerpt From:
Business Case for Edmonton Public Schools' Participation in
the Development of a National Learning Portal
-LearnCanada**

The mission of Edmonton Public Schools, as an advocate of choice, is to ensure that all students achieve success in their individual programs of study.

It is the belief of Edmonton Public Schools that parents, students and community members are committed as partners and accept their respective responsibilities in education.

The mission is being accomplished through exemplary staff performance, program diversity, measured student achievement of outcomes and decentralized decision-making.

<http://www.epsb.edmonton.ab.ca/resources/policy/ae.bp.htm>

Statement of Purpose

The mission of Edmonton Public Schools will be supported by participating in the development and implementation of LearnCanada, a national repository of learning objects with an advanced learner interface that will support Canada's education community.

Rationale for Involvement

I. LearnCanada will enhance the mission and goals of the district.

By participating in the development of LearnCanada, Edmonton Public Schools will make progress toward achieving the mission of the district and, in particular, the following board priorities.

- To improve student achievement.
- To ensure high quality teaching and high quality leadership.
- To provide a learning environment that fosters continuous learning.

Improving Student Achievement

The LearnCanada initiative will assist the district in improving student achievement in the following ways:

- (a) By providing appropriate and challenging learning experiences for students.

The repository will contain learning objects that can be used by teachers and students to supplement classroom activities. The portal can also be used by learners of all ages in self-directed settings including at school, at home, and in public access points, such as public libraries.

- (b) By providing quality, up-to-date content in a variety of media formats.

The learning objects in the repository will be digital in nature and delivered through Internet and broadband technologies. Digital resources will not become dated as current

textbook and print resources do and, therefore, are more cost-effective. They can be delivered to any location within and outside of the school. The variety of media formats will help teachers to meet the learning needs of students with different learning styles.

- (c) By providing increased choice in programming for students' needs.

The LearnCanada portal and repository will provide increased opportunities for teachers to construct learning activities 'just in time' based upon the most relevant and current content. It will also support schools that provide alternative delivery models, such as virtual schooling and outreach programs.

Ensuring High Quality Teaching and Leadership

The LearnCanada initiative will assist the district in nurturing high quality teaching and high quality leadership in the following ways:

- (a) By providing increased access to professional development opportunities any place at any time.
- (b) By providing alternative formats and choices to meet the professional development needs of staff.
- (c) By providing access to national experts.
- (d) Participation in the Professional Development Beta test will enable staff members to collaboratively work on skills and gain resources in the area of Classroom Management.
- (e) By participating in the development of pedagogy of online learning.

Fostering Continuous Learning

The LearnCanada initiative will assist the district in fostering continuous learning for students, staff, and Continuing Education clients in the following ways:

- (a) By providing access to quality learning at school, Continuing Education sites, at home, and at other public access locations.
- (b) By collaborating with partners outside of K-12 education.

II. Leadership initiatives involving technology for learning will be enhanced.

The entrepreneurial culture of the district provides a basis for decision-making and risk-taking that is unique in the K-12 educational sector. By participating in LearnCanada, the district will continue to be on the leading edge of technology by:

- Increasing the level and standard of connectivity in the schools
- Increasing the skills of staff in using technology effectively to support learning
- Enhancing the district's capacity to develop computer applications to support teaching, learning, and management functions
- Supporting the district's initiatives in implementing curriculum and developing learning resources

Increasing the level and standard of connectivity in the schools

All of the 205 schools in Edmonton Public Schools are connected to the district's wide area network and to the Internet. Over 25% of the schools have high-speed access to the Internet using virtual private network (VPN) technology. The installed base of VPN solutions means that the district can respond quickly to improvements in technology, including bandwidth. By

participating in the LearnCanada initiative, there is the potential of providing more extensive access to broadband information communications technologies.

Increasing the skills of staff in using technology effectively to support learning

The staff of Edmonton Public Schools is highly skilled in the use of computer technology. A recent district-wide assessment of staff skills revealed that 96% of teachers are at least moderately skilled, 38% meet or exceed the expectations, and 10% exceed the expectations. The LearnCanada initiative will provide staff with opportunities to continue to gain new skills with technologies that can enhance teaching and learning.

Enhancing the district's capacity to develop computer applications

The district Information Technology (IT) department has experience in developing specialized applications such as student information, course registration, and billing systems. Their web-based sites and applications also have limited e-commerce capabilities. The expertise gained by collaborating with industry and government research and development departments will enhance the skills and capacity of the IT department.

Supporting the district's initiatives in implementing curriculum and developing learning resources

Because of the pan-Canadian nature of the LearnCanada initiative, the district will be able to collaborate with other organizations that are involved in the implementation of the Western Canada Protocol and the Pan-Canadian Common Curriculum.

III. Fiscal benefits will be realized.

All participants in LearnCanada will benefit financially more than they invest. Edmonton Public Schools will benefit by gaining:

- Cost-effective access to quality content
- Access to government and corporate funding
- Economies of scale by working with the partner organizations
- Access to new markets for products and services
- Revenue from cost-recovery products and services

Cost-effective Access to Quality Content

Founding partners in the LearnCanada initiative will contribute content and expertise and, therefore, will benefit from unlimited access to the content and resources. Access to a national repository of learning objects and resources will also reduce the cost and development time of products created by the district.

Access to Government and Corporate Funding

Government and corporate funding is available for high-level collaborative ventures that engage in research and development in providing lifelong learning opportunities to Canadians using broadband and Internet technologies. Access to this funding is not available to the district unless it participates in a project of the scale of the LearnCanada initiative.

Economies of Scale by Working with the Partner Organizations

By pooling the expertise and resources of the partner organizations, it will be possible to develop content and resources that would not be possible at the district level.

Market Positioning

LearnCanada will provide a national presence for all of the partners, which will translate into increased awareness of the products and services provided by the district.

Revenues

Founding members will participate in profits generated by the LearnCanada initiative. It is expected that a return on investment can be realized within 3 years.

Closing Comments

The decentralized approach to decision-making in Edmonton Public Schools allows schools to strive for the best possible information and communications technologies. The district's emphasis on technology implementation and integration coupled with involvement in innovative projects such as the LearnCanada initiative, will help to prepare students for the new global workplace while supporting the district's leadership position in education and technology.

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