

Implementing Distance Education Programs in a Saskatchewan School Division

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Abstract

Effective distance education programs begin with careful planning and a focused understanding of course requirements and student needs. Appropriate technology can only be selected once these elements are understood. Distance education programs develop through the hard work of students, faculty, facilitators, support staff, and administrators. Considerable effort is required to integrate the various resources each brings to course development.

In 1995, Saskatchewan Education began working toward placing distance education strategies within a broad range of multi-media learning programs. Their vision intended to link learners of any age with one another and with educators within our province and beyond. Two major goals of their strategy were to:

- support equitable, flexible, and affordable access to education; and,
- help learners acquire skills needed to participate in a knowledge based society.

This paper will examine the types of distance education programs that a Saskatchewan school division could develop. A systematic implementation plan will be proposed (see Figure 1) and an overview of Saskatchewan Learning initiatives that could assist a school division will be reviewed.

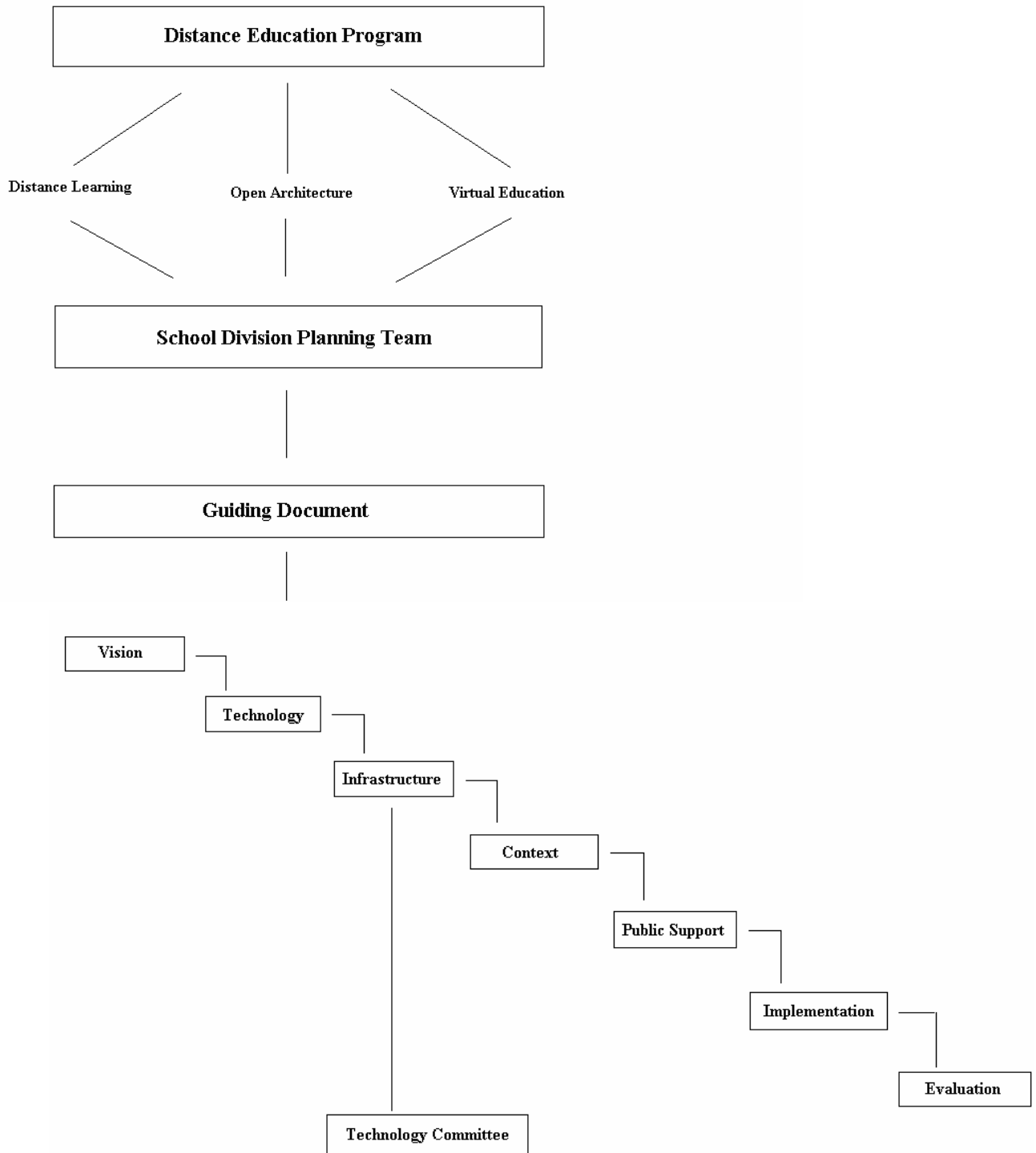


Figure 1. Systematic plan for implementation of a distance education program within a Saskatchewan school division.

Implementing Distance Education Programs

Within the context of traditional teaching methodologies and strategies employed in Saskatchewan public education, numerous factors must be coordinated for effective instruction to occur. Once specific learning objectives have been chosen to support curricular goals, the teacher must carefully match the instructional strategy, instructional methodology, and evaluation device to optimize student success. The data gained during this process enables the teacher to qualitatively or quantitatively describe student performance and provide insights to necessary revisions to the delivery of the lesson. Quality instruction must be diligently planned, delivered and undergo systematic monitoring and evaluation.

Within this framework, an educator is responsible for blending the instructional process with the specific learning needs of the student. These same demands placed upon traditional teaching must also be dealt with in distance learning. An understanding of distance education, open architecture education and virtual education and current practices within these fields will lead to strategies that ensure the continuation of effective teaching.

There are some that believe that these fields are so intertwined that there leaves little to distinguish between them.

Distance learning" is where most or all of the learning by the student occurs outside the traditional classroom, through the use of paper resources, video, teleconferencing, Computer Managed Learning (CML), or on-line courses on the Internet. The terms "distance learning," "distance education," "distributed

learning," "correspondence," "homestudy," "cyber school" and "independent study" have almost identical meanings (Distance Learning, n.d., para. 1).

Ian Mugridge (1991) felt that distance education is

a form of education in which there is normally a separation between teacher and learner and thus one in which other means - the printed and written word, the telephone, computer conferencing or teleconferencing, for example- are used to bridge the physical gap (p. 313).

This definition does not take into account that there can exist a separation of time as well as space between the teacher and learner. The Saskatchewan Teachers Federation (1997 p. 3) adopted the view of the International Council for Distance Education that recognizes the possibility of such a separation. "Distance education is a mode of instruction in which the student and teacher are separated in time and/or space and where two-way communication takes place through nontraditional means for the most part." Garrison and Shale (1987, pp. 10-11) formulated criteria that recognize the asynchronous and synchronous nature of communication that may exist.

1. Distance education implies that the majority of educational communication between teacher and student occurs non-contiguously.
2. Distance education involves two-way communication between teacher and student for the purpose of facilitating and supporting the educational process.
3. Distance education uses technology to mediate the necessary two-way communication.

No matter how one defines distance education it is important to remember that the delivery mode focuses more on the needs of the institution to preserve the goals of its programs than meet the individual needs of the learner.

By contrast, distance learning is a student-centered approach to instruction. The learner is still removed from the instructor as in distance education and interactions between the two are provided via external links. Other commonalities include the use of technology to access, store and deliver information. This form of learning promotes the manner in how learning will be developed in accordance with the needs and goals of the student.

Open architecture education is similar to distance learning in that a program designed to meet the needs of the student is delivered in a collaborative manner using a variety of technologies. In contrast to distance education, open architecture education serves the goals set by the student before addressing institutional needs. By adopting the philosophy that learning is a life long endeavor, cultural, economic and social needs are recognized as essential ingredients to be incorporated in the development of the instructional plan for the student. Unrestricted learning is possible in this scenario.

Virtual education is a form of learning that can best achieve the parameters established for a life long learner. It allows for the necessary flexibility in developing methods of delivery that satisfies the intellectual needs of the student. Utilizing a blend of asynchronous and synchronous interaction through a variety of technologies, many of the learning activities that occur in face to face traditional classrooms can be employed.

Within the context of this paper, distance education programs refer to distance education, distance learning, open architecture education or virtual education. The form

chosen by a school division will be reflective of student needs, geography, cultural diversity and socio-economic conditions. These factors will guide those in leadership positions in setting their mission and vision for distance delivery programs.

In order to effectively implement an effective distance education program within a K - 12 school division, leadership must be available to guide school board officials, central office administration, school level administration, teachers, students, parents and partners from outside agencies to formulate distance education policies. The leadership must guide the educational partners toward a common mission and vision for distance education, keeping in mind the philosophy of the school division so that all buy in to the aims and goals of the program.

Depending on the organizational structure of the school division, leadership could arise from any of the educational partners involved. Once that leader(s) emerge, Anderson (1996) suggested that the policy makers consider such factors as:

- ❑ Assessing the present state of technology and future needs.
- ❑ Providing ongoing evaluation and assessment.
- ❑ Identifying educational institutions that have established and implemented technological classrooms for planning members to visit.
- ❑ Attending conferences and other professional development opportunities that would enable planning members to gather new insights into how technology could be used in the classroom.
- ❑ Determining how often the planning team will meet.
- ❑ Assigning planning responsibilities to team members.

Maintaining this focus will ensure that the planning team will develop a guiding document that illustrates how technology will be used for instruction, management, assessment, and communications.

The resulting guiding document will also be reflective of the school divisions' technology strengths and weaknesses. The North Central Regional Educational Laboratory would caution the leadership to "be driven by educational goals and objectives rather than by technological developments" (Implementing Your Plan n.d., para. 2).

This can best be achieved through the adoption of a systematic technology-planning model that formalizes the procedures and methods for making technology decisions that considers curricular needs before the setting of priorities for purchasing, upgrading, and using technology.

Employing a systematic model is in keeping with the beliefs of Cradler (n.d.) who stated that careful planning is important for effective implementation of technology in education. Factors that a committee need consider when developing their model so that a successful distance education program can be offered to the students of a school division would include:

- ❑ the vision of learning;
- ❑ how technology will support the vision of learning;
- ❑ the supportive infrastructure;
- ❑ the context of the technology plan;
- ❑ public support;
- ❑ plan implementation ; and,

- ❑ evaluating the implementation of the technology plan.

The Vision of Learning

The importance of setting a vision for learning is as important to a distance learning program as to conventional school courses. In terms of best practices, the University of New Brunswick stated that it is important that students understand what is expected of them in addition to what an institution is going to do for them. The development of a clear vision for distance learning will provide the student with fair notice as what to expect from a program.

Some key considerations when developing the vision of a distance delivery program include:

- ❑ Tasks for students;
- ❑ How student achievement will be assessed; and,
- ❑ Materials and resources that will be available to the teacher and student.

By keeping these concepts in mind while vision setting, a planning group will be reflective of how they expect technology will facilitate student growth. The North Central Regional Technology in Education Consortium supports the view that a vision is a key requirement for improved student learning through the use of technology. Having a sound internal vision articulated by the Divisions planning team will provide the rationale for both teacher and student to be willing and dedicated participants in the learning activities.

How technology will support the vision of learning

When developing distance delivery courses, planners must make decisions based on the learning needs of the students. Learning styles, accessibility to resources and curricular objectives become important issues for every lesson developed. It is important

that planners align learning goals with technology implementation. Piele (1989) stated that if learning and technology goals are not determined before implementing technology, technology will become a burden on teachers and drain resources. This can be overcome by having the planning committee develop a vision that ties together curricular goals and objectives with technology usage. Developing this connection will enable the committee members to see how technology is making the students lives better and thus be more receptive to technology planning.

The Supportive Infrastructure

A distance education program relies on human and hardware resources. The current pace of technological change can make it difficult for educators to keep pace with technology through professional development while school boards struggle to fund the latest technologies.

To deal with the demands placed upon the hardware needed to operate a distance education program, consideration should be given to the establishment of a technology committee. This group would support the Division planning team by being responsible for conducting needs assessments and making decisions on how to best use technology within the school division. Such a committee would be responsible for the technology in the labs, computer classrooms, library systems and computer assisted learning systems. This could include responsibility for setting funding for computers, monitors, printers, scanners, video camera, CD and DVD burners, software purchases and maintenance of licenses. The committee would also need to allocate funds for cabling, hubs, routers, switches, patch panels and network file servers.

A technology committee should also manage funds for the professional development of those teaching at a distance. According to Mandinach (1992) there are four stages that teachers go through when applying new technologies in an educational setting:

- ❑ survival
- ❑ mastery
- ❑ impact
- ❑ innovation

If teachers are going to become more proficient in their ability to use technology for delivering distance education programs, the allocation of professional development funds will need to be based on the type of training made available. In a teacher technology use survey conducted for the Dr. Stirling McDowell Foundation it was noted that "The current methods of teacher technology education are producing a subset of 10% of teachers with skills, and a majority of teachers without the basic skills they need" (Beyond The Mouse, 2003, para. 5).

To operate a successful distance education program a Saskatchewan school division will need to position its teachers so that they do not struggle with technology. Teachers will need to be more adept at acting as facilitators of learning and become capable of restructuring the curriculum and learning activities to meet the needs of the students. A technology committee would be well advised to also make recommendations for the professional development of the staff teaching at a distance in the school division.

The context of the technology plan

A school division needs to consider how a distance education plan fits into its overall mission and vision for increasing student achievement. A distance delivery program must integrate with and support all programming for students of a school division. Within the Saskatchewan context, a school division must also examine how a distance education program can dovetail with the community school philosophy and School^{Plus} directives.

One of the beliefs of the community school philosophy espoused by Saskatchewan Learning is that lifelong learning begins at birth and continues throughout life. Schools need to provide learning opportunities for all residents of a community regardless of age. A distance education program will enable schools to meet this goal easily since by nature they allow for one to learn anywhere, any time, at any rate.

The Effective Practices Toward School^{Plus} identifies responsive curriculum and instruction as one of six effective practices that support School^{Plus}. To achieve this end, school divisions must take into account the learning environment, curriculum topics and materials, along with the relationships between teachers, students, parents and community members and the values and needs that each bring to the learning experience. Given the interconnectivity afforded to schools through the Centenary Fund, Saskatchewan schools are well positioned through CommunityNet to build effective distance education programs that are responsive to the needs of the academic audience being targeted.

Public support

For a school division to ensure the longevity of any distance education program, public support must be fostered. Planners can develop support by:

- ❑ engaging in public relations activities;
- ❑ creating opportunities for teachers and students to share information;
- ❑ forging private relationships within the business community;
- ❑ developing links with community service organizations, libraries, museums, science centers, community colleges, post secondary training facilities and universities;
- ❑ providing technology access to all members of the educational community; and,
- ❑ circulating regular reports to the public, highlighting the growth and success of the various programs and partnerships.

Having the support of the public will make it easier for a school division to expand or modify their distance education program to better meet the needs of all the educational partners.

Plan implementation

The success of any program rests on how it is implemented. Planners must be cognizant of the following stages of implementation:

1. resource (budget) development
2. plan evaluation
3. staff selection
4. installation of hardware
5. pilot projects

6. mini-implementation
7. full implementation (Implementing Your Plan, n.d., para.1).

Failure to recognize these stages could easily lead to the demise of a distance education program.

While the first four stages occur before engaging the students academically, they must be addressed. Issues the planners need to consider would include:

- ❑ dealing with contingencies such as change in budget, leadership or teachers;
- ❑ providing access to all students to available technologies in an equitable fashion;
- ❑ providing professional development opportunities for staff teaching at a distance; and,
- ❑ allowing staff to practice and learn how to utilize the available technologies in relation to best teaching practices.

Killion (1999) has stated that one-day workshops are ineffective in comparison to large-scale professional development activities for increasing teacher use of technology in the classroom. School division planners must keep this in mind when developing professional growth activities for teachers so barriers to implementation are not created.

Having dealt with issues of equitable access to technology and necessary professional development of assigned teaching staff, a Saskatchewan school division will be able to begin engaging students in the academia of the distance delivery programs. During the pilot projects and min-implementations decisions will need to be made regarding incentives and sanctions to ensure that all students achieve within the distance program. Planners will need to assess if the needs of the students are being met and make necessary recommendations and policy changes given the data collected.

Evaluating the implementation of the technology plan

With the trend in Saskatchewan to effectively manage schools via data based management techniques, assessment documents used to gauge the effectiveness of a distance education program should collect data on:

- ❑ program impact on student performance;
- ❑ the level of technological proficiency of both student and teacher;
- ❑ key indicators of program success;
- ❑ implementation decisions that accommodate for changes in new information and technology; and,
- ❑ the organizational mechanism that created the program.

Information collected in these areas will allow planners to institute an evergreen approach to program reform. Objectives, priorities, strategies, and resource allocation can be managed within a fluid environment that continually adapts and adjusts to the needs of the learner.

Saskatchewan Learning Initiatives

Saskatchewan Learning is responsible for establishing approved curriculums and implementation support to public school boards within the province. The current model of curriculum development and renewal is based on an evergreen approach. Curriculums are fluid and are in a continual state of development, refinement and implementation. This approach is in keeping with Saskatchewan Learning's beliefs concerning resource-based education.

The concept of resource-based education has its roots in the document *Saskatchewan Education. (1984). Directions: The Final Report.* It is based upon the

Saskatchewan Learnings Goals of Education that affirm Saskatchewan's commitment to meeting the individual needs of the learner. The goals also reflect the understanding that Saskatchewan children have differing ability levels, learning styles and interests. Such diversity must also be considered within the varying languages, geographical areas, cultures and socio-economic backgrounds of our students. Many needs must be accounted for when undertaking educational planning.

This vision of education for Saskatchewan requires that children be active participants in learning. Since 1987 curriculum reforms have centered on moving away from passive modes of instruction toward those strategies and methodologies that engage the student in critical and creative thought processes. With the development of resource based programs, Saskatchewan Learning has provided leadership for school divisions to match locally available resources with the needs and interests of the students.

It is believed that the strength of resource based learning lies in the flexibility and number of options afforded in delivering curriculum objectives. In particular, seven strengths in program delivery are recognized by Saskatchewan Learning.

1. Resource-based education makes provision for the exceptional child, and the child who needs to learn in a different manner.
2. It allows students to vary the rate at which they learn.
3. It encourages children to be creative, imaginative and curious, and to become active rather than passive learners.
4. Resource-based programs offer the choice of a wide range of print and nonprint resources from which to learn.

5. These programs offer students and teachers the opportunity to choose the location in which to learn, whether in the classroom, the resource centre or the community.
6. The instructor may vary, from the classroom teacher, to the teacher-librarian, to an invited member of the community.
7. Resource-based teaching encourages students to make choices and to accept the responsibility for the outcomes of those choices.

Although the application of distance education programs were not envisioned as a means of delivering a resource based program, the inherent philosophies and techniques of distance education have proven a valuable means of fulfilling the vision set by Saskatchewan Learning.

Saskatchewan Learning provided leadership that supported the development of distance learning approaches with the release of *Actualization of Core Curriculum 1999*. This document outlined the responsibilities for achieving the goals of education.

Actualization can be achieved through a combination of planning and supports at the provincial level, and professional decision-making at the school and school division level. Because actualization is a shared responsibility, collaboration among school, parents, and community is essential (Actualization of Core Curriculum, 1999, para. 7).

Pressure was now being exerted Saskatchewan Learning through the Regional Offices to ensure that Directors of Education oversee resource based learning strategies. This pressure coupled with the ever-increasing amount of technology in the schools lead teachers to re-examine the roles multimedia could play in the classroom.

Saskatchewan Learning has also provided leadership and support for the development of distance education courses in Saskatchewan through the Learning Technology Unit. The unit is responsible for developing and coordinating the long-term vision, programs and technology use policies of K-12 education within the province.

School boards have benefited from the assistance of the Learning Technology Unit in:

- ❑ access to information, knowledge and training;
- ❑ skills in the use of technology for the teaching/learning process;
- ❑ materials to support provincial curriculums; and,
- ❑ access to the Evergreen Curriculum.

In particular, the Learning Technology Unit has provided the support of online learning consultants and web-based resource development projects. The unit has overseen the development of the Central iSchool, offers professional development opportunities, server space to host programs and supplied every teacher in the province access to the Blackboard management system for online program delivery. The unit also accepts applications from teachers to develop online courses to be added to an ever-growing list of learning objects for curriculum support. School divisions are well situated to develop distance education programs with the assistance of the Learning Technology Unit.

While school divisions can have students register in online courses taught by various teachers across the province via the Central iSchool, this does not constitute a distance education program. Such courses have limited enrollments and they restrict how many students can take any given course from a particular school. Such offerings have value in that they provide a forum to illustrate how students can learn in a distance environment.

The Central iSchool plays a more valuable role for school divisions through the web-based project courses that have been developed. Such courses are available to school divisions to use as is or rework as they see fit. Using the systematic planning model proposed, a school division can allocate funds for vision setting, infrastructure, implementation, and evaluation considerations rather than course development.

Funding can also be directed toward professional growth activities for teachers to enhance technological and pedagogical skills that are necessary to sustain the distance delivery initiatives of the school division. Mentoring, modeling, joint preparation time, enrollment in technical courses and release time to develop projects are avenues that would be more fruitful than one day mass training workshops.

Conclusions

If a school division desires to implement a distance education program for its students it must first decide upon the format of distance delivery it wishes to pursue. A systematic model needs to be adopted to produce the blueprint that will guide planners through program development. This will ensure that division technology plans are driven by program needs through the establishment of a technology committee responsible for infrastructure and professional development of staff. School divisions can benefit from the curricular leadership and technological support provided by Saskatchewan Learning so that they may allocate funds in a fiscally responsible manner. This approach will instill confidence among the educational partners of a school division and allow the distance education program to evolve and better meet the needs of the students.

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