

Chapter 9

A Four-Step Process to Reposition Small Schools as Sites within Teaching and Learning Networks

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EXECUTIVE SUMMARY

The international problem facing small high schools in rural communities of providing access to educational and vocational opportunities that approximate those available to urban students has been addressed by repositioning these institutions as sites within teaching and learning networks in the Canadian province of Newfoundland and Labrador. Four inter-connected dimensions of change are outlined (technological, pedagogical, organizational, and conceptual) whereby small rural schools in this Canadian province were repositioned as sites in teaching and learning networks thereby enhancing educational and vocational opportunities for senior students. There are implications in these changes for the professional education of high school teachers who are increasingly likely to be required to teach in networked classes as well as in traditional classrooms.

BACKGROUND

The decline of traditional rural education in the Canadian province of Newfoundland and Labrador coincided with a pan-Canadian initiative over a

decade ago to prepare people across the country for the Information Age (Information Highway Advisory Council, 1997; Ertl and Plante, 2004), providing impetus for the classroom application of emerging technologies. In rural Newfoundland and Labrador the introduction of the Internet and

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internet-based technologies has had a transforming effect on the capacity of small schools to deliver programs (Brown, et.al. 2000, Healey and Stevens, 2002; Stevens, 2001; 1999a). In other developed countries with substantial rural populations to be educated there have also been major changes in the configuration of small schools in isolated communities. In New Zealand (Stevens, 2000; 1999b), Finland (Tella, 1995), Iceland (Stevens, 2002), Russia (Stevens et al, 1999) and the USA (Dorniden, 2005; Glick, 2005; Schrum, 2005) a variety of communication technologies have been engaged to promote educational opportunities for students and more efficient ways of organizing and managing knowledge in collaborative electronic structures that have implications for regional economies.

The rapid growth and educational application of the Internet has led to a challenge to traditional ways of teaching and learning at a distance (Ben-Jacob et al, 2000) that were based on paper and the postal system. E-Learning is Internet-based and does not require the degree of central control that distance educators have traditionally employed within dedicated institutions. The growth of e-learning in schools has led to pedagogical considerations and to the development of new ways of managing knowledge that enable these institutions to assume extended roles in the regions they serve. These changes have implications for the professional education of teachers.

In the last decade two e-learning developments have changed the nature of education in rural Canada and, in particular, in the province of Newfoundland and Labrador, including the introduction of the opportunity to study online from schools located in remote communities and the possibility of enrolment in Advanced Placement (AP) courses from rural schools (see Note 1).

CASE DESCRIPTION

The Development of Collaborative Structures to Support Rural Canadian Schools

The search for appropriate new educational structures for the delivery of education to students in rural Newfoundland and Labrador has led to the development of school district intranets, within which virtual classes have been organized. In the process of developing e-teaching within school district intranets, several challenges have had to be met. The electronic linking of eight sites within the former Vista school district to collaborate in the teaching of AP Biology, Chemistry, Mathematics and Physics created a series of open classes in rural Newfoundland that became known as the Vista School District Digital Intranet (See Note 2). The creation of the Vista School District Digital Intranet was an attempt to use information and communication technologies to provide geographically-isolated students with extended educational and, indirectly, vocational opportunities. The development of the intranet within a single school district involved the introduction of an open teaching and learning structure to a closed one (See Note 3). Accordingly, adjustments had to be made in each participating site so that administratively and academically, AP classes could be taught. The Vista school district initiative challenged the notion that senior students in small schools have to leave home to complete their education at larger schools in urban areas. By participating in open classes in real (synchronous) time, combined with a measure of independent (asynchronous) learning, senior students were able to interact with one another through audio, video and electronic whiteboards.

In eight schools within the rural Vista school district of Newfoundland and Labrador, 55 students were enrolled in AP Biology, Chemistry, Mathematics and Physics courses. While AP courses are a well-established feature of senior

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