Chapter IV
The Development of Collaborative Structures to Support Virtual Classes in Small Schools

Ken Stevens
Memorial University of Newfoundland, Canada

ABSTRACT

The Internet and an expanding range of technologies have enabled small schools in rural communities in Atlantic Canada to collaborate in addressing problems faced by senior students through the creation of virtual teaching and learning spaces to complement traditional classrooms. In the search for appropriate ways of organizing and managing knowledge in electronic, collaborative structures, two stages of development have taken place in the Canadian province of Newfoundland and Labrador: (i) e-learning for collaboration between schools through the creation of school district digital intranets, and (ii) e-learning in federated structures through the integration of school district digital intranets into a centralized organization.

INTRODUCTION

Almost all countries face the educational policy issue of providing learning opportunities for students who attend small schools in rural communities that are comparable to those expected by their urban peers. For governments, it is often difficult to justify the expense of providing specialized teaching and other resources for small numbers of students in senior rural classrooms. Until the advent of the Internet and the facilitation of virtual classes, senior students in rural communities have been encouraged to enrol in boarding schools, most of which are located in

urban areas. Another rural education policy in developed societies has been to transport senior students from small and isolated communities on a daily basis to larger centres to enable them to take advantage of more extensive curriculum options. The advent of the Internet, and its expanding role in the provision of education, has enabled a new policy response that allows senior students in small rural schools to remain in their home communities while joining classes in schools in other places in both real (synchronous) and delayed (asynchronous) time. For parents and senior students in many rural communities in Canada and other developed societies there are now expectations that a full range of secondary school curriculum options will be provided in local schools (Mathiasen, 2004).

In the Canadian province of Newfoundland and Labrador, most schools are located in small, geographically-isolated, coastal communities. Many rural Newfoundland and Labrador communities are declining in size as people leave traditional occupations based on fishing to seek work in other parts of the country. Small schools are therefore becoming smaller, and over the last two decades, many have closed permanently. During this period of rural community and school decline, the Internet became available for educational use, and in this part of Canada, it has been the basis for the creation of new structures (digital intranets) and processes (e-learning). Internet-based structures and processes have provided ways of enhancing the provision of education in small rural communities by extending learning opportunities within and between them through the development of collaborative virtual classes.

NEWFOUNDLAND AND LABRADOR

Newfoundland and Labrador is Atlantic Canada's most eastern province. It has a population of approximately 500,000 people, of whom less than 28,000 live in Labrador. The province has a distinct culture, lifestyle, and history, and became part of Canada as recently as 1949. Beyond the capital city, St. John's, the provincial population is located mostly in coastal settlements known as "outports" across a large geographic area (156,185 square miles), thereby presenting challenges for the delivery of education, particularly at senior high school level. Approximately two out of three schools in the province are located in rural communities which require special consideration in the development of collaborative, Internet-based structures and processes.

The search for appropriate new educational structures for the delivery of education to students in rural Newfoundland and Labrador led to the development of School District Digital Intranets, within which virtual classes, based on e-learning, have been organized.

In the last decade, there has been considerable re-organization of the school system in Newfoundland and Labrador, largely because of rural to urban migration together with a net outflow of people from the province. In 1996, ten Anglophone school district boards were created in the province together with one province-wide Francophone board, a reduction from 26 school boards. In this re-organization of school boards, the Vista School District was created. When it was established, the Vista School District contained 18 schools ranging in student enrolment from 650 to 40 and covered a large area of about 7,000 square kilometres. The region had a population of about 35,000 people, and an economy supported by a diverse infrastructure including fishing, forestry, farming, mining, aquaculture, and tourism. There were 5,165 students enrolled in 18 schools in the district, taught by 366 teachers. The Vista School District was approximately two hours by road from the capital city, St. John's. With continued reduction in school size in many rural Newfoundland and Labrador communities, the provincial administration of schools was further reorganized in 2003 to create four Anglophone and one Francophone school boards.

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