Distance, Climate, Demographics and the Development of Online Courses in Newfoundland and Labrador

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ABSTRACT

One of the assertions of the Actor-Network Theory is that physical factors can be actors within a network of other factors which determine the development and use of technology. This paper documents the impact of climate, distance and demographics on the adoption of online courses at Memorial University of Newfoundland in Canada. The qualitative study demonstrates that these physical factors did influence professor’s decisions to use online courses. The findings support the Actor-Network Theory and provide insight into the interaction of physical and human actors within a network that facilitated the adoption of online courses at the university being studied.

Keywords: Actor-Network Theory, Change Theory, Distance Education, Educational Technology, Innovation, Online Courses

INTRODUCTION

Over the past 30 years, Memorial University has had a record of leadership in distance education and educational technology. In the 1960’s and 1970’s the university was a pioneer in the use of educational television. The first course using e-mail was introduced in 1988 and the first online course was introduced in 1994, well ahead of many other institutions in Canada and around the world. Today, the university offers distance programs in many areas including complete degrees and certificates. The purpose of this paper is to identify and explore how physical factors can influence the adoption and use of online courses at universities.

There is evidence to suggest that the growth of online courses in Canada will continue. More technology is being integrated into teaching at both elementary and secondary schools (Ertl & Plante, 2004). Also, some authors have speculated that current and emerging trends in older adult education may lead to an increase in demand for online courses in the future (Thompson & Foth, 2003). With an increased use of information and communication tech-
nology by all age groups in society, there will likely be an increased demand for new options in terms of education programs and services. There is also strong evidence that government policy and funding initiatives will encourage the development and use of innovative technology in learning.

BACKGROUND

Memorial University is the largest university in Atlantic Canada and the only university in Newfoundland and Labrador. There are 18,000 students engaged in full- and part-time studies at undergraduate and graduate levels at the university. The university employs 950 full-time faculty, 850 sessional instructors, and 2,300 administrative and support staff (Memorial University, 2009). It has campuses in St. John's, Newfoundland, Corner Brook, Newfoundland, and a smaller campus in Harlow, England. Undergraduate and graduate degrees, as well as diploma and certificate programs, are offered in the faculties of arts, business, education, engineering, medicine, music, nursing, pharmacy, physical education, science, and social work. The institution was founded in 1925 as Memorial University College and was granted university status in 1949 when it was rededicated to honour the province’s casualties from the World Wars.

Newfoundland and Labrador has a sparse population of 508,944 (Newfoundland and Labrador Statistics Agency, 2009) spread over a huge geographic area. The province is also faced with variable and often harsh climatic conditions. These geographic and climatic conditions may have provided the impetus for the university to become a leader in the development of distance education. The province is located on Canada’s East Coast, with the island portion of the province located in the Gulf of St. Lawrence and the larger Labrador portion on the Canadian mainland. The total area of the province is 405,720 square kilometres, which is more than three times the size of the other Atlantic Provinces combined (Nova Scotia, New Brunswick, and Prince Edward Island). If it were one of the United States, Newfoundland and Labrador would rank fourth in size behind Alaska, Texas, and California. It is almost one and three quarters the size of Great Britain. The early settlement patterns of the province were influenced by the reliance on the fishing industry, which resulted in most of the population being widely spread in small communities along the more than 17,000 kilometres of coastline (O’Flaherty, 1999). The enormous but sparsely populated area of Newfoundland and Labrador, with its severe geographic and climatic conditions, has posed a number of challenges to the traditional on-campus mode of university education.

As well as the physical conditions, many social pressures add to the momentum to use technology to overcome these challenges—rather than pursuing other possible solutions. The reaction to the resettlement efforts of the government in the 1960s and the more recent emphasis placed on rural development provides evidence of a political culture that guides policy decisions (Inverson & Matthews, 1968; Matthews, 1978; Morgan, 1997). The political dynamics and the culture of the province also put pressure on governments and public institutions to provide services to rural areas, as shown in various government documents (Government of Newfoundland and Labrador, 2007; Government of Newfoundland and Labrador, 2006a). The commitment to use information and communication technology as a tool for social and economic development is apparent in the investment made by successive governments to expand broadband Internet services to rural communities throughout the province (Government of Newfoundland and Labrador, 2006b).

LITERATURE REVIEW

A branch that emerged from the influence of the social constructivist theories of the 1960s was the Sociology of Scientific Knowledge (SSK), which was advocated by scholars such as Kuhn (1962), Bloor (1976), and Feyerabend (1978). In the SSK, all knowledge is treated as being
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