Chapter XII

Science Net: A Virtual School for the Extension (Science) Education of the Public in Singapore

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Abstract

A university-science center partnership called Science Net has been functioning as a virtual school for the extension (science) education of the global public in general and the Singapore public in particular. This chapter describes the design, implementation mechanics and learning

potential of this online school for non-formal science education, and suggests that it is an innovative experiment to expand the communicative space of learning in society.

Introduction

The advent of the Internet is impinging in multi-dimensional ways on various aspects of societal endeavors. A personal computer and a network connection are sufficient to open up new vistas in the Internet as well as mine the World Wide Web for a range of resources and information.

One area that the Internet has impacted very significantly is in education. Starting to dissolve the perimetric boundaries of traditional education structures in both the institutional and curricular domains, it is redefining the way education is being disbursed as well as opening up new genres of learning. Online learning is now beginning to be recognized as an important aspect of the educational dispensation (Chen, Ou, Liu, & Liu, 2001; Lupo & Erlich, 2000; Maes, 2001; Sanders & Morrison-Shetlar, 2001). Almost all schools and universities, at least in the developed world, have a web presence and their portals feature an abundance of learning resources.

The "dotcoming" of schools has led to an important development with far-reaching implications: the opening of a virtual annex which mirrors their traditional roles and objectives in some ways. Such virtual schools have mushroomed in large numbers in the USA and in Canada, especially at the K-12 level, and have spawned a plethora of online learning communities. Leveraging the Internet to foster distance learning among a group of students who are geographically dispersed, their impact has been sufficient to generate a number of studies (for example, Clark, 2001, and references therein). Whilst they have yet to mature fully, as the technologies and standards of delivery are still evolving, they are continuing to proliferate with a view towards catering to diverse learning needs.

While traditional schools are fundamentally institutionalized to support the needs of the industrial economy, virtual schools, in contrast, are a reaction of the opportunities engendered by the emerging knowledge-based economy, also known as the information economy. The knowledge economy puts a premium on intellectual resources, in contra-distinction to human resources per

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