

# The Canadian TeleLearning Network of Centres of Excellence and Its Potential for User Modelling Research

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TeleLearning is one of Canada's Networks of Centres of Excellence (TL-NCE), a geographically distributed, but conceptually focussed, network of researchers and client communities from across Canada who are collectively working on the development, application, and evaluation of advanced technologies to support human learning (<http://www.telelearn.ca>). The underlying research philosophies are based on collaborative learning and knowledge building, using the most advanced communications and information technology. Over 130 researchers from education, the social sciences, computer science (including the presenter of this talk), and engineering from 30 universities are working with client communities to achieve the Network's mission. Among the goals of TL-NCE are (i) to develop new models of learning, learning environments, and pedagogies to better meet the needs of the workplace and the nation; (ii) to develop and transfer new technologies that can manage, sustain and constructively direct networked learning; (iii) to understand the nature of effective TeleLearning communities at all levels.

In this talk, I will discuss TL-NCE and its current and potential need for user modelling. TL-NCE is a rich environment in which to explore user modelling, both by providing interdisciplinary perspectives to the research effort and by supplying client groups from industry, government, and educational organizations to field test new user modelling ideas and to extend the technologies developed in research labs into the community. Moreover, the potential application of user modelling techniques to TL-NCE cuts across a wide range of TeleLearning areas, for example, (i) to ensure appropriate metaphors and interface options for different types of users (learners and teachers); (ii) to enable adaptive course generation, teaching strategies, and content selection; (iii) to adaptively support collaboration, group formation, and role assignment; (iv) to adaptively configure TeleLearning communication environments; (v) to dynamically find appropriate peer helpers and support their interaction; (vi) to provide input to socio-economic modelling based on models of individuals and groups. In some of these areas, such user modelling research is being actively pursued; but in most of them user modelling is neither being investigated nor deployed. The non-trivial challenge facing the user modelling researchers in TL-NCE is to demonstrate to our social science and humanities colleagues and our industrial partners the value-added that can be provided by user modelling and other artificial intelligence techniques.

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