RESEARCH APPLICATION I-CORE

Abstract

One of the most significant developments in contemporary education is the shift of research and practice away from the focus on the individual learner to the view that knowing and understanding are anchored in cultural practices within communities. This shift coincides with technological advancements, such as the introduction of the World Wide Web and subsequently Web 2.0 technologies, which reoriented end-user computer interaction from individual work to communication, participation and collaboration. However, while daily interactions are increasingly engulfed in mobile and networked Information and Communication Technologies (ICT), in-school learning interactions are, in comparison, technologically impoverished, creating the phenomenon known as the school-society digital disconnect. Furthermore, despite the strong educational potential and the increasing presence ICTs display in formal and non-formal educational environments, there is little evidence of their overall positive effect on the quality of learning. The main reason is that state-of-the-art technologies in education are used predominantly not to challenge, but to sustain traditional pedagogical approaches.

We can no longer consider “schooling” and “society” as separate entities. Rather, we must bring together the theoretical and practical tools of scientists in both the social and educational sciences in order to examine what types of interaction, knowledge construction, social organization and power structures: (a) occur spontaneously in technology-enhanced learning communities or (b) can be created by design. We refer to these, respectively, as the study of ambient, naturally occurring, environments, and of designed environments. By adopting a definition of learning as the co-creation of knowledge in technology-enhanced learning communities, and by bringing together a cohort of expertise within the fields of education and the social sciences, the LINKS I-CORE will generate the highly productive synergy between the study of ambient and designed technology-enhanced communities that is at the heart of our project.

The goals of the LINKS I-CORE are: (a) to develop a unified theoretical framework that will explain and substantiate learning processes in technology-enhanced communities; (b) to incorporate these insights into the design of open-source technology-enhanced learning environments that will improve education from early childhood to adulthood; and (c) to develop a set of guidelines to support policy-makers in decisions that will provide all citizens with 21st century skills, and eventually lead to social enhancement and economic growth of Israeli society. To meet these goals, we have identified three central research areas regarding learning in technology-enhanced communities that we expect to have the greatest potential to produce novel outcomes: (a) ways in which shared knowledge and understanding develop in technology-enhanced communities; (b) ways in which technology-enhanced communities build shared practices, norms and regulations; and (c) ways in which technology can foster learning within and between a diversity of people from various sectors of society.

LINKS synergy in the Knowledge and Understanding theme will create salient new opportunities to explore technology-enhanced learning in communities in the continuum that ranges from educational to everyday settings. In the Practices and Norms theme we will zoom in on fundamental aspects of individual-group relationships, and will explore how people develop norms while creating, communicating, coordinating and collaborating without the intermediation of traditional social institutions. In the Diversity theme we will focus on various digital divides, and how technology-enhanced community tools enable communication and foster learning within and between society’s diverse sectors. To support the cutting edge research in each of these themes pertinent technologies based on Web, mobile, or tangible interfaces will be designed, developed and explored using the LINKSLabs infrastructure that we will establish. Furthermore, we will conduct large scale, cross-theme research that will synthesize data from the rich variety of contexts and participants and will provide essential groundwork for the development of our envisaged theoretical framework.

Given the prominent fields from which our group of researchers emanate—education, educational psychology, learning sciences, communication, health and social welfare, knowledge management, information sciences, law, human computer interface and instructional design—we expect to generate the critical mass to effectuate the paradigm shift in education studies towards the transformation in knowledge, power and well-being that will prepare citizens for lifelong learning in today’s information-based networked society.