Preface

The emergence of Web 2.0 triggered a general trend towards online social interactions and brought sociology in the global interactive picture. The emergence of Web 2.0 has brought about the opportunity to create new educational uses of Web 2.0 user centred software. Social software platforms, human networks, and human activities in Web 2.0 refer to a set of technologies for sharing information and communication. Web 2.0 has led to the creation of new technologies at a rapid pace.

The participant as a learning community member is the central point in the learning opportunities provided by 2.0 approaches in e-learning. E-learning 2.0 puts the user as a learner and her community at the centre of the learning process. From a technical viewpoint, the integration of social software has created interesting new possibilities for organizing novel learning and working situations. From an educational viewpoint, this phenomenon created issues related to individual and social learning for internalisation and externalisation of information and knowledge (Vygotsky, 1978). Studies on relationships, practices, and activities with the use of tools in the purpose of learning appear to present contradictory results (EFQUEL, 2006; Cuban, 2001). Current learning management systems support administrative functions; thus, they target teachers’ information provision, resulting in most cases in poor learning opportunities for the learner. Studies on social relationships, interactions, and engagement between the e-learning participants, as well as practices and activities with the use of tools for the purpose of learning appear to present contradictory results. Thus, design for socio-cultural learning requires social tools; this means that social and personalised tools should be integrated within a learning platform.

These issues in educational technologies appear to be connected to the computational history. Computing pioneers, such as Engelbart (1963), seemed to adopt a learning summit on using the machine for the ‘augmentation of human intellect.’ Shackel (1991) suggested that the designers need to enable human’s capabilities, while Mumford (1983) proposed that socio-technical systems design assists designers to maximize human gains while achieving business and technical excellence. Therefore, some answers lie in the principles of computing and in particular social computing. Social computing is concerned with the intersection of social behaviour and computational systems. According to Dourish (2004), there is a need to incorporate social understandings into interface design as the systems we use are embedded in systems of social meaning, fluid and negotiated between us and the other people around us. By incorporating understandings of how social practice emerges, we can build systems that fit more easily into the ways in which we work. In other words, tools designed using social understandings of interactions, in turn, enhance social interactions with computation. Is this feasible in educational computing?

EDUCATIONAL SOCIAL SOFTWARE FOR CONTEXT AWARE COMPUTING: COLLABORATIVE METHODS AND HUMAN INTERACTION

Educational social software is Web-based software supporting learning via group interaction. Under this paradigm we can consider a range of applications such as Weblogs, wikis, social bookmarking and
syndication systems, multiplayer online games, discussion forums, or even 3D worlds. The knowledge is empowered under social construction relative to the activity and situations in which it has been explored (Brown, Collins, & Duguid, 1989). For Dabbagh & Bannan-Ritland (2005), “there is a social framework or culture surrounding a learning context and its constituents are the learners, the interactions that those learners engage in, and the tools that enable those interactions.” In interactive educational technology, this is related to context awareness; context is organisational or cultural and the context that surrounds learning activities on the interface. In other words, methods, learning activities, tools, and evaluation are highly interconnected. For example, computer-supported collaborative learning is an interdisciplinary trend to emphasise the use of methods such as ethnography to extract implications for design based on its situated context.

For this reason, the key objective of this book is to look into the socio-cultural elements in educational social computing focused on design and theory driven where learning and the setting are intertwined. The book discusses the basis of a broad framework for learning environments and online in particular, enriched with contributions from domains, sometimes as diverse as computer science (application design and engineering of human interfaces), psychology (the application of theories of cognitive processes and the empirical analysis of user behaviour), sociology and anthropology (interactions between technology, work, and organization), and industrial design (interactive products).

In conclusion, this book is anchored in the concept that by exploiting human skills and experiences, information technology empowers and enhances learners’ capabilities. It revisits the socio-cultural learning summit on examining learning quality by using the machine for the augmentation of human intellect, productivity, improvement, and innovation at individual, organizational, societal, and global levels.

The book’s objective is to serve all parts involved in computer-supported collaborative learning in both the business and the education sector with regard to educational context-aware social interactions. In addition, the multidisciplinary approaches will attract readers from different fields such as education, communication studies, sociology and anthropology, and computer science.

These are the sections for the organisation of the chapters:

- Introduction to Educational Social Software
- Educational Social Software Technologies
- Educational Social Software: The Teacher Perspective
- Educational Social Software Applicability and Evaluation

DESCRIPTION OF CHAPTERS

This edition aims to illuminate aspects of educational social software (ESS) related to human-human and human-computer interactions by employing diverse methodologies and technologies aiming to a better understanding of the online CSCL settings. The Web 2.0 technologies for active engagement and collaboration, as well as networking and social interactions, created a debate in education. The mere provision of knowledge was related to poor learning opportunities, in comparison to the advantages of the co-construction of new knowledge anchored in collaborative creativity in CSCL and e-learning, in particular. Thus, our book is structured in four broad areas: Section 1 introduces ESS. Section 2 refers to the associated technologies. Section 3 presents the teachers’ perspective in ESS and Section 4 discusses ESS applied and validated case studies.

The book includes 14 chapters from prominent international collaborating authors from Australia, Canada, Estonia, France, Italy, Spain, Turkey, United Kingdom, and USA.

The following section presents an overview of each chapter.
ORGANIZATION OF THE BOOK

Section 1: Introduction to Educational Social Software

In Chapter 1, the agents of change of Web 2.0 social and knowledge-based society point to the need for self-organising communities and collaboration. In this way, mere provision of knowledge becomes innovation and brings quality in learning and the acquisition of new skills. The authors discuss the ESS affordances and provide examples of contemporary and associated learning analytical frameworks. Pedagogy 2.0 is proposed as the innovative learning paradigm based on the key elements of personalisation, participation, and productivity.

In Chapter 2, the pedagogical use of social software in e-learning 2.0 is related to the technologies and social networking from the perspective of transactional control in fostering student learning. In addition, the chapter examines the implications of Web 2.0 related learner control, as well as pointing to cultural interactions using Facebook. It examines ways and offers recommendations that instructors and students can effectively use to control their learning environment within an intracultural setting.

In Chapter 3, user-generated content within ESS is discussed in regard to its impact in education. As new skills and competencies are needed in one’s lifetime, more and more adults attend life-long learning programs. These new learning needs include literacy in information and communication technology (ICT), learning autonomy, self-regulation, and metacognition. Consequently, the author presents the dialogue between the new requirements the era of Web 2.0 for creativity and collaboration brings in education and the new learning opportunities which this environment conveys.

Section 2: Educational Social Software Technologies

In Chapter 4, several educational activities are presented related to each type of the multiple intelligences. The authors present the argument that although students are exposed to many educational activities, instructors generally do not take multiple intelligences into account. For example, assessment activities are still associated with the mere provision of information without considering active engagement in educational activities aiming in collaborative creativity. In the Web 2.0 context, educators may have to revise their instructional plans by seriously considering the integration of multiple intelligences and new technologies into their courses.

In Chapter 5, the interactive whiteboards (IWB) are presented as the latest technology trend in schools and businesses. The author discusses ways to promote active engagement and interactive content with the use of ESS and IWB in particular. IWB technology has several advantages as the users are able to interact, collaborate, and evaluate their own work. IWB integration in the classrooms brings numerous issues to address: professional development, interactivity, feedback, collaboration, user attitude, and the future of the IWB.

In Chapter 6, a Web annotations tool is examined in relation to social interactions. Although it is usually employed as a collaborative tool or as a medium of artistic or social criticism, the tool was introduced in a mathematics course for online pre-engineering students. The aim was to enable communication between the students and their contents and evaluate the acquisition of basic mathematical competencies in relation to the communication improvement. The authors present a model to support online interaction analysis and classification in relation to the use of this communication tool.

In Chapter 7, an empirical study is presented investigating the ways interactions with the popular tagging tool del.icio.us are related to knowledge adaptation via concept assimilation and accommodation. In their case study, the authors observed a relationship between the quality of social tags and the forma-
tion and enrichment of concept schemas. Their proposed formal model is based on distributed cognition framework and provides good fits to the associated learning material. The implications are connected to the ways Web 2.0 technologies can promote CSCL in formal and informal settings.

In Chapter 8, ScreenPLAY is presented as an interactive video intervention for at-risk teens to enhance their social skills and motivation. The authors present the pedagogical ideas behind ScreenPLAY and the need for a content-driven social-skill intervention to promote experiential learning. Other than a constructivist perspective, cognitive and linguistic concomitants with social skill acquisition were targeted in relation to learning as change of behaviour. Ethical issues are also presented as of major importance in this age group and are related to interface design challenges.

Section 3: Educational Social Software: The Teacher Perspective

In Chapter 9, the role of the e-tutor and her competencies is discussed in relation to the e-learning 2.0. The author attempts to answer questions on the new set of professional functions that are required and the associated training policies. Such e-tutoring needs are needed so the e-tutor can effectively work in e-learning scenarios from a lifelong, sharing knowledge, and social networking perspective.

In Chapter 10, communication and connection are presented as essential instruments for a community of professional educators. The author was anchored in the community research and developed a 12 characteristics framework to investigate the online and offline community settings. Offline communities and an online discussion forum for educators are observed, analyzed, and evaluated for a “space” conducive for the community development. The author found that, in these communities, the active participation level is directly correlated to the likelihood of benefit.

Section 4: Educational Social Software Applicability and Evaluation

In Chapter 11, the case of the Canadian government is presented related to challenges of attracting and retaining new employees, as well as ensuring that all public servants have the necessary skills and knowledge to do their jobs well. From a life-long perspective, the federal Public Service implemented informal learning strategies to facilitate knowledge creation and exchange and to manage tacit knowledge within communities of practice. The authors also present the strategic context, challenges, lessons learned, and vision for the future.

In Chapter 12, different possible ESS uses are considered for university teaching. The authors argue that if Web 2.0 tools are used properly, they can actually favour collaborative learning and promote new ways of teaching and learning. They present their work on ESS uses in the university campus and propose a hybrid learning model aiming to combine the potential of technology with the possibilities of collaborative learning.

In Chapter 13, the use of the publishing/social network site lulu.com is presented as a virtual learning environment for photopublishing projects with undergraduate digital photography students. The authors employed “e-tivities” and collaborative rubrics that appeared to support learners’ daily network practices, namely their use of social network sites to get their work seen and peer-reviewed.

In Chapter 14, ESS and Web 2.0 with its inhabitants is presented as an evolving and ecological environment, discussing and elaborating the connectivist framework. The authors focused on methodologies to examine ESS and the ways they become accommodated with their users forming learning spaces and user-generated context for individual and collaborative learning.
REFERENCES


