E-learning is an extremely challenging research context: The facilitation of learning through technology requires a multi-fold consideration of issues that fall into cognition, behavior, beliefs, and attitudes, as well as social constructions such as networks, communities, groups formation, recommendations, and exploitation of human capital.

Knowledge management, on the other hand, poses a critical question to researchers: To justify abstractions that provide a systematic way for the management of knowledge. Extremely interesting literature covers a wide range of issues that relate to knowledge management processes and knowledge category models as well as knowledge networks and communities. From another point of view, the discussion of knowledge management strategies is based on a five-layer approach: artifact, individual, group, organization, and interorganizational network are recognized as critical locations where knowledge can be identified and exploited.

This work discusses the role of knowledge management as a reference theory for e-learning. The five chapters represent leading-edge research in the convergence of knowledge management and e-learning and, moreover, outline the challenging future. The first chapter, entitled “Knowledge Management as a Reference Theory for E-Learning: A Conceptual and Technological Perspective,” authored by guest editors Lytras, Naeve, and Pouloudi, concentrates on the contribution of the special issue and, moreover, introduces the concept of semantic learning cubes as a new paradigm for learning objects. Moreover, it presents a rich picture of research problems that currently are under investigation in the context of knowledge management and e-learning convergence.

In the second chapter, entitled “On the Convergence of Formal Ontologies and Standardized E-Learning,” by Miguel-Angel Sicilia and Elena Garcia, the authors address the practicalities of the representation of LOM metadata instances into formal on-
ologies, discussing the main technical and organizational issues that must be addressed for an effective integration of both technologies, and sketching some illustrative examples using modern ontology languages and a large knowledge base.

A key challenge in learning objects strategies is the exploitation of tacit knowledge characteristics. The third chapter, by Sheizaf Rafaeli and Yuval Dan-Gur from the University of Haifa, Mt. Carmel, Israel, and Miri Barak from the Massachusetts Institute of Technology, USA, addresses these problems. In their chapter entitled, “Social Recommender Systems: Recommendations in Support of E-Learning,” the authors have presented an online learning system—QSIA—which is an active recommender system for questions sharing and interactive assignments designed to enhance knowledge sharing among learners. Recommendation systems can play a large role in online learning as providers of tacit knowledge. In such systems, learners can receive guidance in locating and ranking references, knowledge bits, test items, and so forth. The core task of a recommender system is to recommend, in a personalized manner, interesting and valuable items and help users make good choices from a large number of alternatives without having sufficient personal experience or awareness of the alternatives.

The fourth chapter, authored by H.K. Yau, E.W.T. Ngai, and T.C.E. Cheng from the Hong Kong Polytechnic University, Hong Kong, PR China, is entitled, “A Conceptual Framework and an Architecture for the Development of an Agent-Oriented Knowledge Management Supported E-learning System.” They justify and discuss in detail a three-level approach to multi-agent societies for e-learning. The design and implementation of intelligent agents is the critical bet for the promotion of e-learning. In other words, intelligent infrastructures supporting unique learning experiences and fulfilling a motivating learning context have to be justified in theoretical abstractions. Multi-agent societies will set an extremely interesting research area in the near future. The mobility of agents is also an exciting area for further research. Mobile agents that travel from one machine to another (e.g., from a desktop to a palm top) will promote the vision of ubiquitous learning.

The fifth and last chapter entitled, “A Knowledge Management Roadmap for E-Learning: The Way Ahead,” is authored by the guest editors. This chapter outlines a vision for the evolution of e-learning in the near future. The technological pace and the advent of the knowledge society will be in the next years the new context for e-learning evolution: The convergence of learning and the daily life of citizens worldwide will be evident in new services and transparent technologies. The pervasive or ubiquitous learning will be a critical cornerstone and an ultimate achievement of the e-learning research community. Additionally, worldwide efforts will deliver the social responsibility character of e-learning. In this chapter, we try to address two critical questions: How will knowledge management and relevant technologies affect e-learning? and What are the critical research questions for the new period of e-learning evolution? Many of these aspects could initiate an interesting PhD research.

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a tight schedule to come up with their revised versions in a timely manner. Last, but not least, we thank the editors-in-chief, Prof. S.K. Chang and Prof. Timothy Shih, for their comments, encouragement, and support, which made this work possible. We encourage readers to provide us with comments concerning this work and researchers to take into account the identified areas for future research.