

Open Networked “i-Learning”

Gianluca Elia • Antonella Poce
Editors

Open Networked “i-Learning”

Models and Cases of “Next-Gen” Learning

Foreword by Aldo Romano

 Springer

Editors

Gianluca Elia
University of Salento
Department of Innovation Engineering
Euro-Mediterranean Incubator
Via per Monteroni s.n.
73100 Lecce
Campus Ecotekne
Italy
gianluca.elia@unisalento.it

Antonella Poce
Università Roma Tre
Department for Educational Design
Via della Madonna dei Monti 40
00184 Roma
Italy
poce@uniroma3.it

ISBN 978-1-4419-6853-1 e-ISBN 978-1-4419-6854-8
DOI 10.1007/978-1-4419-6854-8
Springer New York Dordrecht Heidelberg London

Library of Congress Control Number: 2010933237

© Springer Science+Business Media, LLC 2010

All rights reserved. This work may not be translated or copied in whole or in part without the written permission of the publisher (Springer Science+Business Media, LLC, 233 Spring Street, New York, NY 10013, USA), except for brief excerpts in connection with reviews or scholarly analysis. Use in connection with any form of information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed is forbidden.

The use in this publication of trade names, trademarks, service marks, and similar terms, even if they are not identified as such, is not to be taken as an expression of opinion as to whether or not they are subject to proprietary rights.

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

*To my parents, Marco and Ebe,
Who made possible the learning
experience which is my life*

(Gianluca Elia)

To Fabrizio and Alessandro

(Antonella Poce)

Foreword

In current global business scenario, productivity and competitiveness are increasingly dependent on the capability and efficiency of organizations to generate, process and apply knowledge at intra- and inter-organizational level. This implies that, to obtain and sustain competitive advantage, organizations have to learn better and faster than their competitors. So, learning becomes the core process of the organization, a powerful “weapon” to face the rapid and unpredictable changes within hypercompetitive markets. Actually, some on field researches identified the “learning organization” model as a value-creating configuration (in terms of sales per employees, revenue growth and net income growth). Today, Human Capital proves to be fundamental for innovation and business performance, more than the role played by Financial and Physical Capital.

At the same time, the tremendous development of the ICT (Information and Communication Technologies) is generating an extraordinary and pervasive impact on social and business relationships, accelerating processes and enhancing significantly the obsolescence rate of products and services.

Framed into this mindset, human resource can be conceived as a particular kind of “extended-product”, with a higher level of complexity for its hybrid nature due to the influence of services, and its strong and multifaceted characteristics embracing different disciplines, fields and contexts (pedagogy, psychology, economy, innovation, technology, organization, etc.). Thus, as a product, also the human resource with its knowledge, skills and competencies is subjected to the rapid obsolescence phenomenon. Nowadays, its life cycle is becoming shorter and narrower and, since we live in a knowledge-based economy, it is emerging a sense of “urgency” in fulfilling the knowledge and competency gaps.

Trying to stop or ignore the resulting complex scenario is practically impossible; pointing out few and simple rules to manage the complexity and to create value from it, it is a must to be pursued!

The first driving simple rule to take in high consideration is represented by the *lifelong learning* paradigm. This drives human resources to continuously self-renew their knowledge background and skills repository, related both to vertical and technical fields, and to transversal and communication fields. This not only enhances social inclusion, active citizenship and personal development, but also competitiveness and employability.

The potential of innovation and value generation deriving from the impact of these dynamic learning processes on the entire organizational areas and business configuration has not been fully exploited yet.

Resistance to change of people, the increasing complexity of business scenarios, and the big and profound transformations enabled by the ICT within social, business and public life, are generating a sort of “organizational myopia” that hinders the effective orchestration of the alignment between business strategy and learning strategy. In this situation, stimulating individual, organizational and inter-organizational lifelong learning proves to be a powerful lever to inject new energies and innovate products and services. This represents a big challenge for CLOs (Chief Learning Officers), CKOs (Chief Knowledge Officers), human resources managers, learning designers, and teachers, professors and experts as well.

The authors of this book propose a systemic model to activate and sustain learning processes, mainly into the higher education and adult fields.

The proposed model is also perfectly aligned with the basic principles of the Lisbon’s Strategy and the lifelong learning paradigm that are promoted and supported by the European Union.

The authors call this model “*i-Learning Model*”, where “*i*” stands for:

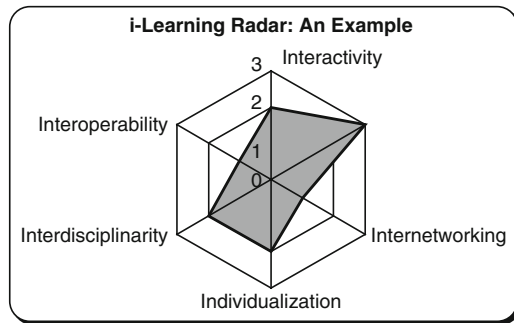
- “*Innovation*”, to characterize the multi-faceted innovative features within an open and networked environment, and
- “*Incubator*”, to introduce the new holistic environments in which learning processes should happen.

A process-based perspective and a technology-based perspective of the *i-Learning* model is also provided.

The model realizes a set of integrated and synergic interventions based on six main key dimensions:

- The rethinking of curricula architecture and competence profiles, through a balanced mix of technical disciplines and soft skills (i.e., critical thinking, communication skills, mind flexibility, foreign languages fluency and international issues understanding);
- The development of a new mindset within involved people and actors, based on openness, networking, and lifelong learning;
- The innovation of learning approaches and strategies;
- The adoption of new technologies enabling new models of collaboration, knowledge creation, diffusion and access;
- The evolution of traditional learning environments based on a fixed and static concept of time and space, into stimulating, dynamic, exciting, creative, adventurous, rigorous, demanding, and empowering workplaces, active laboratories, and informal learning settings;
- The integration of the old fashioned set of metrics, mainly based on formal theoretical examinations and no-contextualized assessment, with a new set of metrics based on the capacity to design and realize valuable projects, and to build and participate actively into knowledge and learning communities, building networks and relationships. These dimensions represent the operational areas in which realizing a paradigm shift in learning.

Finally, the “*i-Learning Model*” has been also supported by an operational tool useful to design and represent an “i-Learning experience”. This tool is constituted by a radar diagram with six trajectories, as shown in figure below: *interactivity*, *immediacy*, *internetworking*, *individualization*, *interdisciplinarity*, and *interoperability* (“*i-Learning Radar*”). It is not a case that these keywords start with the “i” letter: they want to contribute to clarify more the theoretical discussion of the model, and to help researchers, experts, institutions, training departments, managers and executives, professionals and instructional designers to operationalize the model, so creating innovative learning experiences and new emerging profiles. At this purpose, the book discusses also the arising of the “*II-shaped*” professionals, a new archetype that represents an evolution of the “*T-shaped*” people, in the era of the lifelong learning.



Chapter 1 is completely devoted to present the “*i-Learning Model*” in detail.

Chapters 2, 3, 4 and 5 present the instances of the model applied in different contexts (academic or corporate), involving heterogeneous targets (students, employees or young managers), in different knowledge domains. These chapters give evidence on the feasibility and applicability of the “i-Learning Model” for developing new professional profiles. As shown below, each chapter is characterized by its own i-Learning Radar.

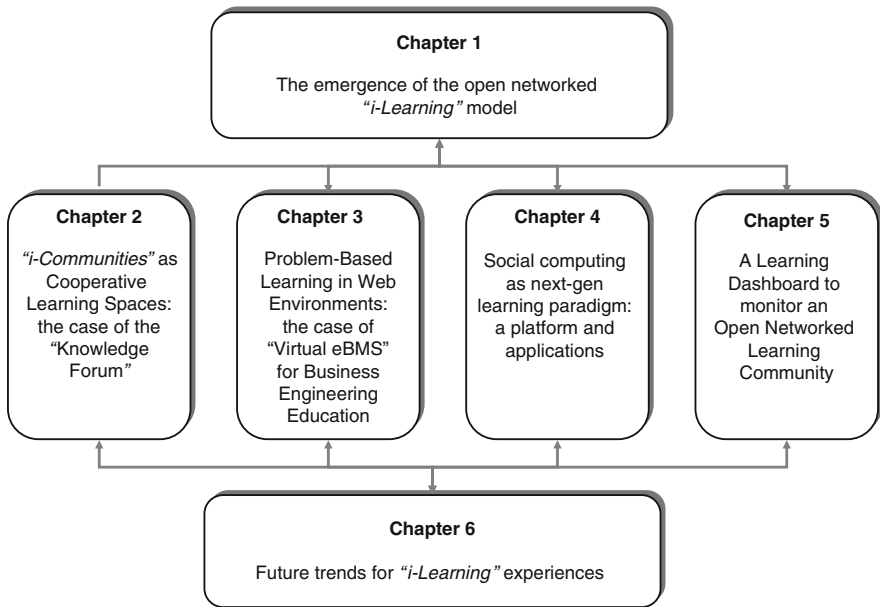
Finally, Chap.6 outlines future trends for designing better “i-Learning” experiences. Specifically, these trends concern technological and institutional issues. As far as the former, the adoption of promising technologies mainly related to the *Future Internet Technological Framework* is discussed. At this purpose, the concepts of *Personal Learning Environment* (PLE) and *Cloud Computing*, with some deepening on *Mobile Learning Environments* (MLE) and *3D Learning Environments* (3DLE) are particularly deepened. As concerning the institutional issues, the emerging “*Stakeholder University*” archetype is presented as the model of the University of the twenty-first century. Coherently with the lifelong learning paradigm, it could be considered as the model in which the traditional Training Departments or Corporate Universities archetypes can converge. The inspiring principles of the Stakeholder University are openness, networking, interdisciplinary and value-orientation.

Prof. Aldo Romano
President of DHITECH Scarl
(District of High Technologies)
(www.dhitech.it) - Italy

Preface

The book is structured in six chapters. Specifically, Chap. 1 presents the open networked model enabling i-learning processes. This model is further applied in four cases that are described in Chaps. 2–5. Finally, Chap. 6 discusses future trends impacting on “next-gen” learning.

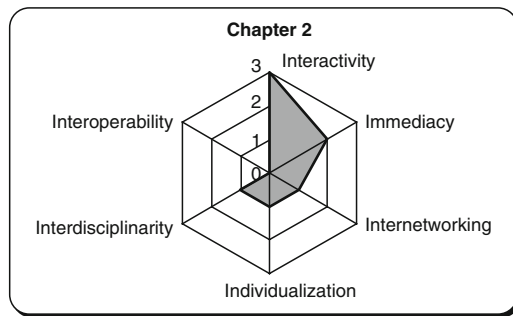
The following figure gives a graphical representation of the book’s architecture.



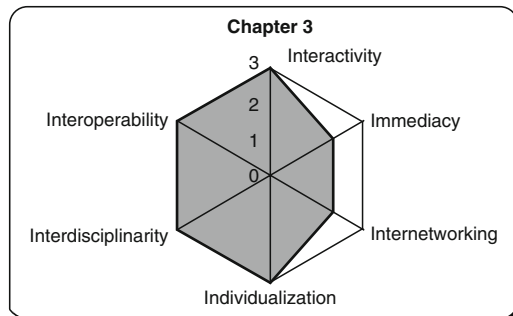
Chapter 1: “The emergence of the Open Networked i-Learning Model”. The author Gianluca Elia provides an overall description of the model, highlighting the process-based perspective and the technology-based perspective. The chapter introduces the model moving from the main changes happening in ICT sector, in Management, as well as in Society and Workplace. Moreover, the proposed model contributes to shape a new professional archetype for leading change, named “*H-shaped*” people. Finally, it is also presented the “*i-Learning Radar*”, an

operational graph with six trajectories (*interdisciplinarity, interactivity, internet-working, individualization, immediacy, interoperability*) useful to design and represent an “*i-Learning experience*”.

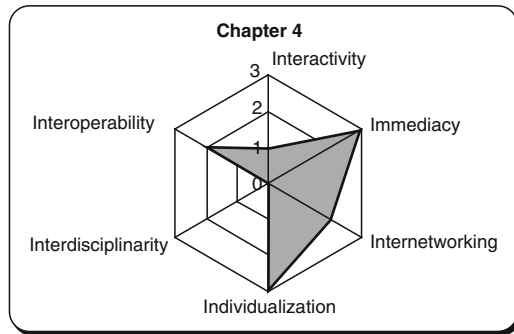
Chapter 2: “*i-Communities as Cooperative Learning Spaces: the case of the Knowledge Forum*”. The author Antonella Poce highlights mainly the concept of *interactivity*, by introducing the “*i-Communities*” as cooperative and interactive learning spaces. She presents the pedagogical foundations of the “*i-Communities*”, the new role of the involved actors, the change of strategy, the different approach to contents and to the use of technology, the updated conception of space and time characterizing the learning dynamics. Finally, a case study named “*Knowledge Forum*” is presented to highlight the main knowledge- and learning-based advantages carried out by this new kind of communities.



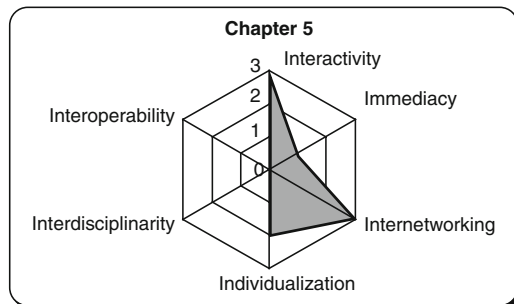
Chapter 3: “*Problem-Based Learning in Web Environments: the case of Virtual eBMS for Business Engineering Education*”. The authors Gianluca Elia, Giustina Secundo and Cesare Taurino present a case study where Problem Based Learning approach is applied to a Web-based environment, through the design and the implementation of an innovative platform named “Virtual eBMS” (eBMS stands for e-Business Management Section, a research and education department of Scuola Superiore ISUFI – University of Salento, Italy). The authors describe firstly the system from the technological and service based perspectives; then they present two cases in academic and entrepreneurial context. The chapter provides illustrative concepts and applications that make Virtual eBMS a proof-of-concept of “*interactivity*”, “*immediacy*”, “*internet-working*”, “*interoperability*”, “*interdisciplinarity*”, and “*individualization*”.



Chapter 4: “Social computing as next-gen learning paradigm: a platform and applications”. The authors Alessandro Margherita, Cesare Taurino and Pasquale Del Vecchio discuss how individuals and groups interact for learning and working purposes, through the generation of Internet applications tagged as web 2.0. In this chapter, the authors describe an innovative platform (named “WeLearn”) designed and implemented to support a case-based and project-driven learning strategy. A set of illustrative scenarios are described, for the development of business and technology management competencies in undergraduate and graduate education programs. This chapter highlights five dimensions of the implemented i-learning model presented in the first chapter: “interactivity”, “immediacy”, “inter-networking”, “interoperability” and “individualization”.



Chapter 5: “A Learning Dashboard to monitor an Open Networked Learning Community”. The authors Francesca Grippa, Giustina Secundo and Marco De Maggio propose an operational model to monitor and assess an Open Networked i-Learning Community. Specifically, the model is based on the Intellectual Capital framework, and it relies on the social network analysis to map several and complementary perspectives of a learning network. The chapter highlights three fundamental dimensions of the open networked i-learning model: “internetworking”, “interactivity” and “individualization”.



Chapter 6: “Future Trends for i-Learning Experiences”. The authors Gianluca Elia and Antonella Poce outline future technological and organizational trends for designing better “i-Learning” experiences. Technological trends are mainly related

to the Future Internet technological framework, and they underline the concepts of *Personal Learning Environment* (PLE) and *Cloud Computing*, with some deepening on *Mobile Learning Environments* (MLE) and *3D Learning Environments* (3DLE). Organizational trends are focused on presenting the emerging of the “*Stakeholder University*” archetype as emerging model to support competence development processes in twenty-first century.

Feedback

We are interested in hearing your comments about this book and about the effectiveness of your applications of the “i-Learning Model”.

Your suggestions and your work will contribute significantly in realizing a society.

Our hope is to share with the reader feedback and insights that contribute to shape a world in which learning is like the air we breathe, and effective application of knowledge is like our heart that beat.

This will make better our society, our people and our planet.

Acknowledgements

This book is the result of a collective work, made implicitly and explicitly by all the authors and their respective research groups.

Without their passion, their exciting work, their continuous provocations and insights, this book would not exist.

A special thanks to Prof. Aldo Romano, a visionary and open-minded entrepreneur in learning field, convinced supporter of creative destruction processes inspired to a Schumpeterian view of innovation, and real inspirer and hidden director of this work. His suggestions and his way of thinking “out-of-schema” have been the main sources of energy to write this book.

We would thank also Prof. Giuseppina Passiante and Prof. Ernesto Damiani, for their precious suggestions, scientific recommendations and continuous support they provided for this work.

A remarkable appreciation to Prof. Benedetto Vertecchi and Prof. Gilly Salmon for their researches and studies that have inspired the pedagogical soul of this book.

A great recognition to the technicians of the Euro-Mediterranean Incubator of Scuola Superiore ISUFI (University of Salento), especially the “hardware, networking & security” team, the “software architecture & development” group, and the “web learning” staff: their professionalism, patience and spirit of sacrifice are at the basis of the successes we reached together.

This book represents also a result of the project “*eLD@Med.Net – eLearning for Development*”, a research project funded by the Italian Ministry for Education and Research aimed at developing an integrated system of e-Learning and Knowledge Management supporting innovation in the learning processes into the Mediterranean space.

A remarkable thanks to the learners, technicians, researchers, professors vice-presidents, presidents and directors of Universities, Institutions and Technoparks of the Southern Mediterranean Countries with which many of the authors had (and continue to have) the pleasure to collaborate: Al Akhawayn University (Morocco), The University of Jordan (Jordan), Jordan Education Initiative (JEI), Technopole Elgazala (Tunisia), Casablanca Technopark (Morocco), Arab Academy for e-Business (Syria), CGEM (Morocco), ANPME (Morocco), CTICI (Tunisia), IHEC Cartage (Tunisia), and many others organizations that represent a first nucleus of partners on the road of the “i-learning” experiences. With them, we continue to work for designing jointly the future of our collaboration.

Contents

1	The Emergence of the Open Networked “i-Learning” Model	1
	Gianluca Elia	
2	i-Communities as Cooperative Learning Spaces: The Case of the “Knowledge Forum”	39
	Antonella Poce	
3	Problem-Based Learning in Web Environments: The Case of “Virtual eBMS” for Business Engineering Education	61
	Gianluca Elia, Giustina Secundo, and Cesare Taurino	
4	Social Computing as <i>Next-Gen</i> Learning Paradigm: A Platform and Applications	91
	Alessandro Margherita, Cesare Taurino, and Pasquale Del Vecchio	
5	A Learning Dashboard to Monitor an Open Networked Learning Community	111
	Francesca Grippa, Giustina Secundo, and Marco De Maggio	
6	Future Trends for “i-Learning” Experiences	133
	Gianluca Elia and Antonella Poce	

