SELF-REGULATED LEARNING IN TECHNOLOGY ENHANCED LEARNING ENVIRONMENTS
TECHNOLOGY ENHANCED LEARNING

Volume 5

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Scope
The rapid co-evolution of technology and learning is offering new ways to represent knowledge, new educational practices, and new global communities of learners. Yet the contribution of these changes to formal education is largely unexplored, along with possibilities for deepening our understanding of what and how to learn. Similarly, the convergence of personal technologies offers new opportunities for informal, conversational and situated learning. But this is widening the gulf between everyday learning and formal education, which is struggling to adapt pedagogies and curricula that were established in a pre-digital age.

This series, Technology Enhanced Learning, will explore learning futures that incorporate digital technologies in innovative and transformative ways. It will elaborate issues including the design of learning experiences that connect formal and informal contexts; the evolution of learning and technology; new social and cultural contexts for learning with technology; novel questions of design, computational expression, collaboration and intelligence; social exclusion and inclusion in an age of personal and mobile technology; and attempts to broaden practical and theoretical perspectives on cognition, community and epistemology.

The series will be of interest to researchers and students in education and computing, to educational policy makers, and to the general public with an interest in the future of learning with technology.
Self-Regulated Learning in Technology Enhanced Learning Environments
A European Perspective

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Self-regulated learning (SRL) subsumes key aspects of the learning process, such as cognitive strategies, metacognition and motivation, in one coherent construct. Central to this construct are the autonomy and responsibility of students to take charge of their own learning. The value of SRL is in its emphasis on the individual as a pivotal agent in defining learning goals and strategies, recognizing as it does how that individual’s perceptions of him or herself alongside learning-task characteristics influence the quality of learning that emerges.

Successful self-regulated learners should be able to: recognise a need to learn (for example, be able to spot significant current or impending gaps in their knowledge); make wise choices in relation to that need (about what to learn; how and when to learn it; and whom to learn it with and from); and satisfy that need efficiently and affordably (for example, by obtaining data on the experiences of other learners, then using that data to set and achieve their own study goals). In addition, because learning is effortful, self-regulated learners must be able to sustain their motivation until the ‘job’ is done.

It has been recognised that the majority of learners need help in achieving a level of self-regulation. The building blocks required to self-regulate are not necessarily available to each and every learner. For example, learners are often unaware of gaps in their own knowledge and skills and are poor at identifying critically important information. These, and other key skills for self-regulation, can be encouraged both directly and indirectly through a range of learning activities. In this book we look specifically at the ways in which technology enhanced learning environments (TELEs) have been used to support self-regulation.

We hope that after reading these contributions you will agree that networked forms of TELEs hold significant promise. For example, by helping learners to acquire new knowledge and skills at an early enough stage in their development to benefit fully from them (which often means before institutionally-accredited courses are available), and to become more agile in thought, in practice and when crossing disciplinary boundaries. In addition, they offer the prospect of helping people to compare ideas and experiences more readily with peers and mentors, and thereby develop the robust independence of mind and collaborative skills needed to cope in turbulent times, and to seek out or create knowledge that may lead to solutions to tomorrow’s problems.
WHY WE THINK THIS BOOK IS TIMELY

SRL skills are increasingly needed. Society is in a state of flux and the pace and complexity of change is becoming faster than the ability of curriculum authorities to anticipate and respond to change, bringing the prospect of curricula that are obsolete before they are taught. A potential way for society to obviate this threat is to reduce its dependence on a small cadre of expert teachers (‘sage on the stage’) and instead to empower learners to do more for themselves, preferably via routes and methods that help them to acquire in-demand skills and insights, more surely and much earlier than is possible through the formal educational system. This can be done by exploiting community-focused technologies such as Web 2.0 and services built upon those technologies, and will be enhanced by ontology-rich and semantic-driven environments typical of Web 3.0. One extension to this, relying on SRL for its effectiveness, is the idea of do-it-yourself higher education (Kamenetz, 2010). While cost-saving was the initial spur for interest in the ‘DIY University’, we start to see attention being paid to the lasting benefits of SRL and a growing interest in developing TELEs to support this1.

To illustrate, current European R&D projects in technology-enhanced learning (reported on in the UK chapter) are exploring how learners can augment TELEs (and related Personalized Learning Environments) by adding their own choice of functions and facilities. That choice can include mash-ups of recommender and aggregation services. The result: low-cost/no-cost access to up-to-date information, aggregated from multiple sources (eg, communities of learners, professional communities of practice, libraries, news sites, twitter feeds, and repositories of open educational content). Such projects can help learners to become: better-placed to hear about effective ways to learn to learn; and better able to share experiences, insights and news. Sustainable lifelong learning systems are dependent on the emergence of new generations of competent (i.e., self-regulated) learners.

PURPOSE AND FOCUS OF THIS BOOK

The book provides an overview of recent studies on self-regulated learning (SRL) in technology enhanced learning environments (TELEs) in Europe – a perspective which is new and has not been articulated hitherto. It addresses conceptual and methodological questions as well as practices in technology enhanced learning. While the focus is on European studies, we are aware that much of the groundwork in the field of SRL has emanated from the United States.

The contributions in this book come from authors who first met as partners in a European project on SRL in TELEs2. They also were the founding mothers and fathers of TACONET3, a targeted cooperative network dedicated to conducting research in this field. TACONET organised international conferences in Barcelona (2004), Lisbon (2005, see Carneiro et al. 2005) and Amsterdam (2007, see

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1 Examples include the Peer 2 Peer University (http://p2pu.org) and the Responsive Open Learning Environment (http://www.role-project.eu/).
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Beishuizen et al., 2007). If you find this book interesting, you might consider joining the network.

The book is based in part on a survey which the group conducted in the context of a seed project within the KALEIDOSCOPE Network of Excellence “Concepts and methods for exploring the future of learning with digital technologies”. However, it not only presents an overview of research conducted in eight European countries, but also discusses and reflects on the concept of SRL and related topics.

ORGANISATION

The book is divided into three parts: (A) Foundations of SRL in TELEs, (B) Empirical studies on SRL in TELEs and (C) SRL in TELEs: perspectives on future developments.

The introductory chapters by Jos Beishuizen and Karl Steffens (chapter 1) and Antonio Bartolomé and Karl Steffens (chapter 2) provide a framework for research on SRL in TELEs. While the first chapter focuses on SRL and related concepts, the second chapter addresses different technologies which may support SRL. In his chapter on Pedagogy and learning with the new media, Karl Steffens links the idea of SRL to pedagogical ideas that were proposed by German educators.

The contributions to the second part of the book present and discuss empirical studies on SRL in TELEs. Chapter 4 (Unfolding the potential of ICT development by Manuela Delfino and Donatella Persico) and chapter 5 (Technology enhanced learning in teacher education by Roberto Carneiro and Ana Margarida Veiga Simão) explore the use of TELEs in teacher education to support SRL. Chapter 6 (Recent developments research on fostering self-regulated learning in technology enhanced learning environments by Jos Beishuizen) identifies the characteristics of TELEs that can support SRL in individual or in groups of students. Dominique Lenné, Marie-Hélène Abel and Philippe Trigano (chapter 7) present technological tools which were designed to facilitate SRL.

The three contributions to the last part of the book, chapter 8 (Technology enhanced learning: some impressions by Paul Lefrere), chapter 9 (Learning platforms: Problems and promises by Jean Underwood, Antonio Bartolomé, Paul Lefrere) and chapter 10 (Self-regulated learning in technology enhanced learning environments in Europe by Jean Underwood and Paul Banyard) summarise the discussion on SRL in TELEs and provide a perspective for future development.

Collectively, these contributions show the breadth of European studies on the topic of SRL in TELEs. Our hope is that this book will not only inform readers about the current state of affairs, but will also provoke further research in SRL in TELEs and encourage the implementation and use of TELEs to support SRL.

ACKNOWLEDGMENTS

We thank all the contributors to this book; had they not invested time and effort, this book would not have come into existence. Our special thanks go to Gabrielle
Le Geyt from Nottingham Trent University who read all the manuscripts very carefully, translating different versions of European English into British English.

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