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Section I

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<i>David Parsons, Massey University, New Zealand</i>	

This chapter focuses on the development of a theoretical framework for designing different mobile learning activities, setting out three distinct learning spaces that are explicitly considered throughout the book: individual, collaborative, and situated learning.

Chapter II

Transforming the Practice of Mobile Learning: Promoting Pedagogical Innovation through Educational Principles and Strategies that Work	21
<i>Patrick Danaher, University of Southern Queensland, Australia</i>	
<i>Raj Gururajan, University of Southern Queensland, Australia</i>	
<i>Abdul Hafeez-Baig, University of Southern Queensland, Australia</i>	

This chapter theoretically and practically deploys mobile learning experiences in conjunction with three key educational principles: engagement, presence, and flexibility. Each principle is accompanied by an elicitation of practical strategies that have proved effective in implementing the principles sustainable within particular courses and programs of study, as well as factors that inhibit that implementation.

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Understanding the Value of Interactive SMS for Large Classes	48
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Eusebio Scornavacca, Victoria University of Wellington, New Zealand

Sid Huff, Victoria University of Wellington, New Zealand

Stephen Marshall, Victoria University of Wellington, New Zealand

This chapter describes the development of a SMS-based classroom interactive system (TXT-2LRN) and explores the impact of this application on students' learning experiences.

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Otto Petrovic, evolaris Privatstiftung, Austria & Karl-Franzens University, Austria

This chapter describes how game-based learning activities can be used for an efficient transfer of knowledge in learning processes. In particular, it evaluates a new game-based mobile learning system, revealing its long-term learning outcomes and individual learning efficiency.

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iPods as Mobile Multimedia Learning Environments: Individual Differences and Instructional Design	83
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Peter E. Dolittle, Virginia Tech, USA

Danielle L. Lusk, Virginia Tech, USA

C. Noel Byrd, Virginia Tech, USA

Gina J. Mariano, Virginia Tech, USA

The chapter explores the use of a portable multimedia player (especially iPod™) as an educational platform and reports on a study designed to examine individual differences in iPod™ use. It empirically proposes an important factor for the success of mobile-based individual learning activities, working memory capacity (WMC).

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From Individual Learning to Collaborative Learning—Location, Fun, and Games: Place, Context, and Identity in Mobile Learning	102
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Martin Owen, Medrus Learning, UK

This chapter describes various mobile learning projects, explicitly showing how mobile learning applications have been evolving from supporting individual learning to providing location aware and contextual activity-based learning experiences.

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<i>George Kulick, Le Moyne College, USA</i>	

This chapter addresses the need to empirically examine the impacts of new collaborative technologies including mobile, wearable, embedded, and ubiquitous technologies, on distributed learners. It also introduces a technology-independent framework for considering collaborative learning experiences.

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Constructing Mobile Technology-Enabled Environments for an Integrated Learning Approach	145
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<i>Javier Vélez, Dep. LSI. LTCS Group, UNED, Spain</i>	

This chapter presents a review of the approach, design and implementation of a collaborative mobile learning infrastructure (i.e., ENLACE project). It also includes several case studies of the mobile technology-enabled learning environment.

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Collaboration in Context as a Framework for Designing Innovative Mobile Learning Activities	172
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<i>Arianit Kurti, Växjö University, Sweden</i>	
<i>Marcelo Milrad, Växjö University, Sweden</i>	

This chapter describes the AMULETS (advanced mobile and ubiquitous learning environments for teachers and students) project, which guides students through collaborative learning scenarios in authentic settings.

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Participatory Simulation for Collaborative Learning Experiences	197
<i>Chengjiu Yin, University of Kyushu, Japan</i>	
<i>Hiroaki Ogata, University of Tokushima, Japan</i>	
<i>Yoneo Yano, University of Tokushima, Japan</i>	

In this chapter, the authors use the scaffolding technique to design an interactive and collaborative participatory simulation. Evaluation reveals that this participatory simulation helps both the individual learner and groups of learners to gain a deeper understanding of a sorting algorithm, and encourages more active participation in group work.

Section IV

Enhancing Situated Learning Experiences

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Situated Learning with SketchMap	216
<i>Sosuke Miura, University of Tokyo, Japan</i>	
<i>Pamela Ravasio, University of Tokyo, Japan</i>	
<i>Masanori Sugimoto, University of Tokyo, Japan</i>	

This chapter presents the SketchMap system, which supports children's situated learning by creating maps. Its use is to integrate outdoor and classroom activities, and share the children's experiences through the maps in order to promote situated learning activities.

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<i>Dionisios N. Dimakopoulos, London Knowledge Lab, UK</i>	
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This chapter presents an approach to designing a mobile application for contextual lifelong learning. It assists learners to access, compose and manage their learning in a range of institutional, informal and work-based settings by keeping them connected with content that is relevant to their studies, and its use is demonstrated in three lifelong learning scenarios.

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This chapter discusses a location-aware learning organizer that helps university students manage their learning activities and supports situated learning experiences.

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<i>Ana Dzardevska, Sandfield Information Systems, New Zealand</i>	

This chapter discusses a professional mobile learning experience for those who are in need of more contextual understanding of different work procedures in a specific learning environment.

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Handheld Educational Applications: A Review of the Research 302

Yanjie Song, University of Hong Kong, Hong Kong

This chapter discusses research on applications of handheld devices in education, classifying them into six categories: Educational communication, managing, multimedia access, games and simulations, data collection, and context-aware applications.

Chapter XVI

Assessing the Benefits of AJAX in Mobile Learning Systems Design 324

Feng Xie, Massey University, New Zealand

David Parsons, Massey University, New Zealand

Ajax (Asynchronous JavaScript and XML) is introduced in this chapter, to see if it rightly increases Web page's interactivity, speed, functionality, and usability for mobile learning contents, demonstrating how it can significantly increase a mobile learning application interactivity, speed, functionality, and usability.

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Recommended Readings and Resources 356

Hokyoung Ryu, Massey University, New Zealand

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This chapter compiles a list of recommended books, articles, scholarly journals and conferences related to mobile learning research.

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