Preface

This book provides an introduction to research in learning with technology in classrooms, online and outdoors. Written by leading international researchers, it covers foundational theories and methods as well as recent research into learning in virtual worlds and in social networks. It also discusses social issues and implications such as whether widening access to digital technologies will decrease or increase inequality in education.

Each chapter in the book covers one theme in technology-enhanced learning (TEL), discussing and expanding on four foundational research papers in that theme. The chapters, plus the introduction chapter, can be read as a primer for people new to the field of TEL (also called "e-learning", "educational technology" or "cyber-learning"). Or a chapter can be a route to exploring the theme in more depth, through reading and discussing the selected papers guided by the chapter commentary. Inevitably, we have had to be selective in coverage, and some areas of TEL are not discussed in the depth they deserve, including evaluation of TEL systems, learning through simulations, orchestration of learning with technology and technology-enhanced learning in subject areas including science, technology, arts and languages. In this book, you will find pointers to further reading in these and other related areas.

The idea for this book came from Erik Duval, and he guided its production. Erik was a leader in the STELLAR Network of Excellence in Technology Enhanced Learning, a stimulating nexus of people and ideas from education, computing, psychology and the social sciences. Other outcomes from STELLAR include a Vision and Strategy report and a set of Grand Challenges in Technology Enhanced Learning.[1]

Erik Duval died on 12 March 2016 after two years of illness with leukaemia. Erik's blog[2] starts in 2003 with entries that mix his research interests with commentaries on technology and culture. As his illness takes hold, the blog charts

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[1]http://www.teleurope.eu/

[2]erikduval.wordpress.com

in poignant detail his fears and hopes. The last entry from the 4th of January ends with typical optimism: "For now, I'm mostly hopeful and confident: I wish you all a hopeful and confident 2016 too!".

Erik's work exemplified the interdisciplinarity and continuing innovation of TEL. He researched and developed the core enabling technologies of learning objects and educational metadata and helped to establish learning analytics as a field of international research. As a teacher, he embraced open and social technologies, using his blog and Twitter to share ideas and communicate with students, and also led practice-based courses where students worked together, guided and inspired by Erik. Erik initiated this compendium of research in technology-enhanced learning, as he did many projects, with passion and commitment. In his name, we dedicate this book to all scholars of technology-enhanced learning who share a devotion to helping others learn.

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