Foreword

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of light, it was the season of darkness, it was the spring of hope, it was the winter of despair; we had everything before us, we had nothing before us, we were all going direct to heaven, we were all going direct the other way—in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only. (Charles Dickens, A tale of two cities)

It is an exciting time, and this collection of well-thought-out responses should prove an invaluable starting point for the effective application of new social learning technologies to teaching and learning in higher education. A short time ago I was speaking at an e-learning forum in Hong Kong and was asked, “Now that we have Web 2.0, what about Web 3.0?”—an interesting question! This book also seeks to suggest possible answers by exploring the edges of current and potential future practice. Web 2.0 was a term coined by Tim O’Reilly five years ago when he was trying to identify a shift in the types of Internet applications that were becoming more available; that could possibly provide greater interactivity; and that supported more varied ways of linking like-minded users. As Tony Bates early in this volume collates the definitions from a variety of sources including the now ubiquitous Wikipedia, we are immediately led into a world that more easily supports the social construction of knowledge.

With Web 2.0 tools we are talking about the increasing possibilities of shared construction of meaning; we are also talking about the possibility of new ways of representing ideas and communicating them to others. Several years ago Gunter Kress employed the word “transduction” to refer to the technique that effective teachers employ to communicate a concept to their students. Essentially, this means being able to convert between the forms for representing an idea, such as converting numbers to graphical forms to show the trend and the rate at which something is happening. This ensures that the concept can be visually represented, hence requiring less explanation and less cognitive effort than interpreting a string of numbers. A range of options becomes available with new web-based tools that support the visualization of ideas and how they might be shared with others in select groups or even more broadly. In the early days of educational computing, the tools used to present these representations were often drawn from integrated office application packages. Increasingly, these suites of tools are now being made available through Internet-based sites (e.g., Google Docs and Spreadsheets at http://docs.google.com). Not only do they provide similar functionality, they also enable new forms of sharing and co-construction.
Not only is transduction facilitated, but the generation of new representations does not necessarily destroy the original. The advent of annotation tools that “float over” web pages or sites enables the creator to maintain his/her original content while enabling others to add to and comment on it and to link new ideas, and even other sites, to the ideas and representations. Annotation enables a social component to knowledge construction and it is not constrained to text, as it may also include aural and visual media forms. Consider the site http://www.voicethread.com/, for example, on which users begin with a short movie or animation, and can “scribble” over the top of the images or make voice comments, or even type a few thoughts, all of which are linked to the original material but none of which change its form. Other tools support annotation, co-construction of knowledge, and its representation in a series of different versions: Xtranormal (http://www.xtranormal.com/), for example, shares an animation created by one person with others, who in turn can re-edit and rescore the original and provide it back to the community for further comment and modification.

The attributes of the new Web 2.0 tools enable teachers and learners to relate and work with ideas in new ways that traditional websites and the earlier learning management systems (LMSs) do not allow. With social construction we are no longer talking about a single author, yet we can still retrieve the details of who has contributed to each element of the shared artifact. This is the case with wikis, for instance, which typically enable a log or “history” to tell the story of how the current presentation came to be constructed and displayed in the way it currently is. Group projects, for the first time, can be reviewed in terms of both the individual and cohesive group contributions. Blogs enable shared resources but also can be controlled by the creator, a function not available in current teacher-managed forums and chat rooms inside traditional LMSs. Given the rapid emergence and development of new “open” sites and tools it seems unlikely that the LMS designers will really ever catch up, and maybe we can all achieve a freedom of personal expression!

The early chapters in this book present a comprehensive introduction to the options and tools broadly represented by the term “Web 2.0.” These chapters situate new options in current thinking about learning and what the technologies enable epistemologically.

The second section explores a range of innovative cases that have harnessed some of these attributes to achieve educational outcomes. In many of these cases, the authors are talking about the new geographical relationships possible between teacher and student and among students. Included among these relationships is the need to review the role of mobility and tools that support the development of students’ voices. Most impressive is the distribution of geographical sites from which the cases are drawn—this illustrates the match of these tools and approaches with the authors’ varied cultural contexts of learning.

The third section of the book considers current implications and muses about possible futures. In some ways, cloud computing and 3-D environments are elements that are in the current mix of tools but still being explored. All the explorations challenge us to manage a world in which learning is not constrained by representations, by where information is located, nor by how it is manipulated. Mark and Catherine have edited a collection that should challenge us to re-examine our pedagogies, our notions
of who is in control, our notions of where and how learning occurs, and most importantly, our notions of fun, play, and creativity in the endeavor.

Professor John G. Hedberg  
Millennium Innovations Chair of ICT and Education  
Head, Department of Education  
Macquarie University

John G. Hedberg, Ph.D., is Professor, Millennium Chair of ICT and Education, and Head of the Department of Education at Macquarie University. Over the years, he has worked on several research projects about the use of ICTs in learning, and is an internationally recognized expert and authority in this area. Past/recent projects include: the use of mobile phones as social software tools in orienteering tasks in geography; designing learning objects for small screen display; using cognitive tools to develop mathematics problem-solving repertoire; Internet literacy; and the production of multimodal artifacts in history and science. John has designed training needs assessments and evaluation systems, and conducted workshops on the instructional design and evaluation of e-learning environments. He has been keynote speaker at numerous conferences throughout Australia and in Canada, the United States, Singapore, Malaysia, China, and Europe.