Preface

Social software tools, most notably those that have emerged as a result of the Web 2.0 movement, have spread widely and permeated all sections of society, modes of communication, and the worlds of business and work as well as that of education over the last few years. O’Reilly (2005a, 2005b) demonstrated and described how Web 2.0 differs from “Web 1.0” in terms of the syndication and authoring capabilities of the new social computing applications and the modus operandi of the individuals, groups, and communities that use them to connect, create and share ideas, and communicate. Although there are multiple interpretations of the term “Web 2.0” (see for example, Atkinson, 2006), for the purposes of this book we define it broadly as a second generation or more personalized, communicative form of the World Wide Web that emphasizes active participation, connectivity, collaboration, and sharing of knowledge and ideas among users. Web 2.0 has also been referred to as the “read/write Web” (Price, 2006; Richardson, 2006), as it goes beyond the provision of viewable/downloadable content to enabling users to actively contribute and shape the content.

More recently, O’Reilly and Battelle (2009) have revisited the concept of Web 2.0, in an attempt to elaborate on how the networked applications that are growing daily at an exponential rate are systems for harnessing collective experience. They comment that “The Web is no longer a collection of static pages of HTML that describe something in the world. Increasingly, the Web is the world—everything and everyone in the world casts an ‘information shadow,’ an aura of data which, when captured and processed intelligently, offers extraordinary opportunity and mind-bending implications” (p. 2, emphasis added).

Over the past decade or so, the term “social informatics” (Kling, 1999; Kling, Rosenbaum, & Sawyer, 2005) has also emerged to reflect the centrality of recognizing that the design, adoption, and use of information and communication technologies (ICTs) are profoundly and intricately linked to people’s actions and the environmental and social contexts in which those actions occur. Social informatics and its applications, powered by Web 2.0 technologies including but not limited to web logs (blogs), wikis, Twitter, Really Simple Syndication (RSS), podcasting, social networking sites, tag-based folksonomies, grassroots video, and peer-to-peer (P2P) media sharing utilities (and the list goes on), are now being embraced and embedded across all fields of endeavor. These applications are claimed by many to have a transformative effect on teaching and learning in tertiary and higher education (Allen, 2004; Alexander, 2006).

Web 2.0-based social informatics, with its associated raft of social software tools, is seen to hold considerable potential for addressing the needs of today’s diverse students, meeting their demands for flexible, ubiquitous, media-rich learning experiences through customization, personalization, and opportunities for networking and collaboration. Vast and continually growing numbers of people are frequenting social media sites on the Internet, which are proving fertile spaces for informal and incidental learning. With the ease of use of Web 2.0 tools, user-generated content is now proliferating as digital-age
students are developing and demonstrating the skills needed to be authors, creators, and co-producers of content. In higher education, course materials and learning content have traditionally come from experts such as teachers and textbook authors. However, such “supplied” content is but one of many resources available to assist students in developing knowledge and skills, and has severe limitations, particularly if used in isolation and in a fashion that pre-empts learner exploration and discovery. As a result of the simplicity and speed with which social software can be used to create, share, tag, and upload media, student-produced content can be used to augment the pool of learning resources now available. In what has been dubbed a “rip, mix, and burn” culture, students can become creators, media producers, and critics (Hughes & Lang, 2006; Lamb, 2007). The new tools can be used in creative ways to give today’s learners a greater sense of agency and a more active role in learning, and teachers are often challenged as adopters of new forms of communication and networking.

At the same time, however, there continues to be much debate over Web 2.0-based pedagogical applications and associated theoretical implications, although there is correspondingly little published research in the area of higher education pedagogy and how universities, teachers, and learners have responded to the recent and impending changes. In soliciting and planning the contributions to this book, the editors consciously sought contributions from all over the world that would address central concerns and challenges faced by tertiary education institutions in adopting emerging ICTs, and in engaging staff and students in productive ways of exploiting these new instruments, services, and facilities for learning, teaching, communication, and assessment.

THE IMPLICATIONS OF WEB 2.0 FOR TERTIARY EDUCATION

As Web 2.0 enables more user-centered behavior and the passing of the locus of control from teachers to students, paradigms of teaching and learning are shifting. Historically, e-learning experiences delivered by tertiary education providers have tended to emphasize individual learning, where students have some freedom but are limited by institutionally-controlled systems and platforms like learning management systems (LMSs) and lack the opportunity to tailor or personalize the learning process as a whole. Hilton (2006) describes the impact of Web 2.0 as a combination of both negative and positive energies (i.e., “sunrise” versus “perfect storm”) and as a disruptive and subversive force that is bound to change the face of higher education. With greater availability of information and steady moves toward universal accessibility, the traditional gateways to information provided by the conventional university lecture and library are becoming redundant as such information is available online and to a mass audience. Universities therefore need to re-evaluate their focus and mission in order to support knowledge creation by capitalizing on the new tools and applications to foster interaction, collaborative dialogue, and critical discussion among its clients in ways that are consistent with the philosophy and ethos of Web 2.0, rather than simply remaining as custodians of inert knowledge.

Productive, student-centered pedagogies call for collaborative learning and participation in communities of learning and practice, as well as for a large element of self-managed learning to be fostered, all of which can be supported by Web 2.0 tools if implemented and used in conjunction with pedagogically sound models and learning designs. In academia, this may mean moving beyond the confines of LMSs and tapping into a wider pool of expertise to include community-generated ideas and learning resources. In turn, such a change may result in the empowerment of learners with greater agency, control, and autonomy not only in how they learn, but also in the resources and services they choose to draw upon to support them.
The Learner Experience

Evidence is mounting that teaching and learning contexts need to become more complex and diversified to reflect the reality of the knowledge economy and networked society, and as students increasingly participate in online social networking activities outside the formal boundaries of school and university. There have been several recent reports that detail the growth and uptake of Web 2.0 tools among university students (see for example Committee of Inquiry into the Changing Learner Experience, 2009; Minocha, 2009; Fitzgerald & Steele, 2008), signaling that social software is being used by many to forge new interpersonal ties, to consolidate existing ties, as well as to engage in various forms of social discourse encompassing the sharing of audio, photo, and video files. The increased engagement of individuals in these types of activities is having an impact on higher education, as university entrants often have familiarity with and competence in the use of social computing tools, and they have expectations in terms of accessibility to ICT, of staff competence in enriching teaching with technology, and of being provided with flexible, personalized learning experiences that suit their individual needs, interests, and preferences.

Nevertheless, in a study of the learner experience conducted in the UK by the Committee of Inquiry into the Changing Learner Experience (CLEX, 2009), it was reported that students who have experienced social media as tools for social connectivity may not associate these with teaching and learning, and therefore they may require a reorientation to the educational applications of such tools. Kennedy et al. (2008) also caution against making assumptions or overgeneralizations about students’ use of Web 2.0 technologies outside the classroom and how this might carry over into formal education settings. They present evidence from a large cross-institutional Australian study suggesting that levels of uptake and day-to-day use of collaborative and self-publishing technologies like blogs that have often been associated with the so-called “digital native” generation (Prensky, 2001a, 2001b; see also Chapter 16 in this book) may in fact be much lower than commentators have speculated. Students may also possess high levels of technical ICT skills, but may need to develop critical digital literacy skills to assist them to learn effectively using these tools. Many students lack proficiency in searching for, retrieving, and evaluating information, and it cannot be assumed that all students enter university with these competencies (Lorenzo & Dziuban, 2006; Katz & Macklin, 2007). While many, if not most, may have used the technology for social and personal (e.g., entertainment) purposes, the use of such tools to support learning and study may be unfamiliar, or seem irrelevant or pointless. Teaching and learning with these tools therefore requires academic staff to demonstrate their relevance and to adopt innovative approaches that take advantage of the unique capabilities and affordances of these tools, as opposed to using them simply for the sake of novelty.

Imperatives for Tertiary Educators and Institutions

It must be recognized that the adoption of Web 2.0 in higher education is not achievable without challenge and change, and that change is almost invariably met by resistance. These issues are tackled by many authors in the book, especially in the section on emerging paradigms in teaching and learning (Section 1) and also in Section 2, which is dedicated to illustrative case studies of effective practice. The chapters and case studies elucidate the many challenges that higher education institutions face in keeping up with developments in technology-mediated learning. For example, one of the challenges facing providers of e-learning in higher education is to focus on the opportunities for promoting personalization and individuality within the learning experience. One approach to this end is to augment learning
landscapes by incorporating personal learning preferences, interests, and resources created by students with pedagogically sound institutional platforms and frameworks that use Web 2.0 tools and applications. However, there is a lack of consensus on which paradigms of learning are best used to underpin the pedagogical changes that are currently happening. Additionally, it is arguable that although many LMSs are purported to enable “Web 2.0”-based learning because they include tools such as blogs, wikis, and podcasts, it is arguable that most do not embody the Web 2.0 philosophy; indeed, confining students and teachers to a “walled garden” within which online teaching takes place is at odds with the very essence of Web 2.0, irrespective of the tools supported and used. (See Chapters 5 and 14 for insightful discussions and alternative perspectives on this issue.)

Although Web 2.0, user-generated content, and the open content movement significantly increase the volume of information available to students and expose them to a vast array of ideas and representations, as mentioned earlier, many students currently do not have the competencies necessary to navigate and use the overabundance of information available—they lack, for instance, the skills required to locate and recognize valid, reliable, and current sources (see Windham, 2005; Katz & Macklin, 2007). In a recently published EDUCAUSE Learning Initiative (ELI) white paper, it is recommended that tertiary students be assisted and encouraged to develop sound information literacy skills in effectively finding, evaluating, and creating information. Additionally, beyond search and retrieval, information is contextualized, analyzed, visualized, and synthesized, all of which involve complex critical-thinking skills (Lorenzo & Dziuban, 2006; Jenkins, Purushotma, Clinton, Weigel, & Robison, 2006). While encouraging the production and use of learner-generated content in teaching contexts, there is still a need for students to observe the canons of academic integrity in their own work. Students must be made aware of the expectations regarding citation of sources when engaging in emerging forms of collaborative scholarship and self-expression using social computing tools. In this regard, concerns about copyright, ownership, and intellectual property must be carefully and systematically dealt with by educators and institutions. Fortunately, there are signs of optimism that institutions of higher learning globally have commenced the development of the various competencies in their curricula, as can be seen through some of the many examples in this book (see, in particular, Chapter 6).

A further challenge, and one that is addressed in several of the chapters in this book, entails fostering learner self-direction and self-regulation through the use of social software. The design of appropriate learner-centered interventions and tasks in ways that are congruent with Web 2.0 ethos is not the same as endorsing a “sink or swim” philosophy whereby students are left to their own devices and expected to use social computing tools to learn without the help of suitable instructional support and task scaffolding. In fact, such “open-ended” approaches that neglect to acknowledge the importance of teacher guidance have been heavily criticized by a number of educational researchers (e.g., Mayer, 2004). Tertiary educators, therefore, are confronted with the challenge of negotiating balance in the way of promoting learner control, knowledge creation, autonomy, and agency by offering flexible options and choice, while simultaneously providing learners with the needed guidance and structure and adding value to the learning process (McLoughlin & Lee, 2010). Worldwide, there are a growing number of designs for tasks and learning environments that seek to achieve the aforementioned balance, while integrating Web 2.0 tools as well as the creation, sharing, and use of student-generated content. Once again, many examples of such designs are showcased in this book (see Section 2, in particular).

Staff confidence and competence in using and applying the new tools to support learning constitute yet another critical issue. Effective use of technology to enhance learning demands that teaching staff be armed with both operational and pedagogical competence to maximize benefits for students. There-
fore, professional learning in the area of innovative pedagogies is necessary. Instructors and educators need to possess full awareness of the potential and range of social software tools, and be equipped with procedural knowledge of how Web 2.0 applications can support teaching and assessment in meaningful and authentic ways. In this digital age, teachers who adopt social software tools should not do so merely to appear conversant with the tools, but also need to demonstrate the capacity to integrate the tools into effective pedagogical strategies and designs to add value to existing courses and foster authentic exchange and dialogue with and among students. (Refer to Chapter 19 for further discussion on the implications of Web 2.0 for academic staff/faculty development.)

Theoretical and Practical Challenges Addressed by the Book

There continues to be much ongoing debate and deliberation about pedagogical innovation fuelled by Web 2.0 and social informatics, along with questions relating to the theoretical, practical, policy, and other implications associated with the use of the new tools in tertiary learning settings. In this regard, there has been a paucity of evaluative research that provides conclusive evidence about the effectiveness or otherwise of particular approaches and tools; perhaps owing in part to the attention and hype that has surrounded the area, many published reports on Web 2.0-based e-learning have been merely “show-and-tell,” rhetorical in nature, and bereft of sound theoretical underpinnings. Existing research is highly contextualized, disconnected, and primarily focused on specific, isolated cases, with few studies generalizable to a variety of courses, institutions, disciplines, countries, cultures, and/or student audiences. The diverse chapters in this book address this gap in the research literature.

While the requirement for more unified, transdisciplinary, and systemic empirical investigation is of supreme import, academics worldwide must also not downplay or overlook the value and significance of continuing scholarly dialogue and discussion about what works and why, and which combinations of pedagogic strategies and Web 2.0 tools best target particular desired outcomes. A concerted effort is needed at all levels of tertiary/higher education, from individual to department or discipline through to institutional and sectoral levels, to actively participate in and contribute to the discussion, as well as to work collaboratively to leverage and extend the products and ideas arising from the discussion in ways that promote evidence-based practice. This can be achieved through the development and validation of pedagogical and theoretical models and frameworks that guide and inform practice. It is equally important to ensure that there is feedback from practice to theory, and that both help shape and drive the future research agenda in the field.

All in all, this book provides an informed and well-researched starting point for those seeking answers to some of the many questions surrounding research and practice—and the intersection of research and practice—in the field of pedagogical and institutional change in the Web 2.0 era, and in the effective integration of Web 2.0 tools into tertiary teaching and learning. Questions such as the following are addressed throughout the chapters of this book:

- Does Web 2.0 represent a major conceptual or paradigmatic shift in how we conceive and make use of the Internet as a means of delivering teaching and learning?
- Do the new technologies have anything fundamentally new or different to offer us in the way of improving our pedagogy? What can we do to avoid falling victim to the novelty and hype, and to “technology-driven pedagogy” (Salaberry, 2001)?
• Is Web 2.0 changing the culture of, and/or redefining the competencies needed by, teachers and learners?
• What examples of “best practice” and “good principles” are available, and how can we learn from them?

OVERALL AIMS AND ORGANIZATION OF THE BOOK

The book is structured into three parts or sections, each comprising several chapters that consider current issues, topics, and challenges in adopting Web 2.0 tools in higher education. Each of the 21 chapters deals with an aspect of how Web 2.0 and social informatics are impacting on higher education practice, pedagogical theory and innovation, and/or the roles of teachers, learners, and institutions. Many of the chapters also contain a discussion of scenarios for future learning uses and spaces. The chapters are built on evidence-based practice, and there are case studies of exemplary and innovative applications involving the use of social software in face-to-face, online, and blended learning contexts globally. The content of each of the chapters is outlined below.

Section 1: Emerging Paradigms and Innovative Theories in Web-Based Tertiary Teaching and Learning

Chapter 1 is the first of five opening chapters whose function is to lay the groundwork and “set the scene” for the book. It presents an overview of the history of social software and shows how the changes in each phase have been incremental and developmental, such that new tools that have emerged in the Web 2.0 age are premised on the continuation of a tradition of computer-mediated communication (CMC) and collaboration tools, rather than a radical transformation of social interaction capabilities. The authors maintain that tools for networked social interaction have naturally evolved through a number of phases such as “augmenting human thinking,” “computer-mediated communication,” “group collaboration,” and “collective intelligence,” which can be perceived as the result of current Web 2.0-enabled information aggregation and social networking capabilities. Nevertheless, according to them, Web 2.0 has changed the nature of social interaction and brought about a new “pedagogical ecology” that has implications for higher education in general and e-learning in particular.

In Chapter 2, the author’s focus is on integrating established educational principles of virtual learning with the application of emerging Web 2.0 tools and technologies. He considers the implications of the technological and social changes for the design of learning materials, workplace training, and assessment/accreditation of learners. While rejecting the notion that the new tools of themselves will revolutionize education and make formal institutions redundant, he argues that there are rich opportunities for the creation of new design models for education and training that will better prepare citizens and workers for a knowledge-based society.

The book then continues with Chapter 3, which echoes many of the concerns of Chapters 1 and 2, and further explores the themes of how the new suite of Web 2.0 tools and practices is challenging and redefining scholarship and pedagogy, along with the accompanying need for higher education institutions to adopt innovative approaches to teaching and learning that capitalize on social media. A pedagogical framework, “Pedagogy 2.0,” is proposed that addresses the themes of participation in networked communities, personalization of the learning experience, and learner productivity in the form of knowledge creation and innovation.
Next, Chapter 4 presents the concept of Learner-Generated Contexts (LGCs) as a potential framework for encouraging and engendering the more effective use of technology to support learner-driven learning, and to promote high levels of personal meaning, relevance, and authenticity in such learning. Building on their previous work, the authors concentrate upon the theoretical grounding for the consideration of LGCs as a model to guide, inform, and organize learning design, in addition to illuminating institutional practices and factors that contribute to the success or otherwise of such efforts.

Chapter 5 stresses the importance of taking into account the student perspective, or more specifically, students’ perceptions and expectations of the learning environment, in the design of technology-based or technology-enhanced educational programs, courses, and interventions. It examines the notions of personal learning environments (PLEs) and distributed learning environments (DLEs) as examples of approaches that place students at the center of the learning process, drawing upon and developing their ability to organize and configure their own learning environment(s). It gives an account of a study in which an experimental course design heavily supported by Web 2.0 tools was evaluated by applying an ecological approach of affordances. In the course, students were granted freedom and autonomy to select social media applications and services, and were tasked with assembling and customizing their own PLEs and DLEs, within which they used the chosen tools in self-determined ways according to the affordances they perceived. They were then asked to represent their conceptual understanding of their environments and the activities they performed in visual form, which the authors analyzed to reveal a number of findings. The chapter concludes with a summary of the salient issues and aspects of the authors’ findings as relevant to educators and instructional designers.

Section 2: Towards Best Practice: Case Studies and Exemplars of Web 2.0-Based Tertiary Teaching and Learning

Upon entering the second section of the book we move from a focus on theoretical and pedagogical models and theories to a focus on practice, beginning with Chapter 6, which discusses the importance of assisting learners in acquiring and refining personal knowledge management (PKM) skills to enable them to perform successfully in the Web 2.0 environment within tertiary education and as lifelong learners. The authors present a practical, reusable model consisting of two types or classes of PKM skills, namely basic PKM competencies associated with creating, organizing, and sharing information, and higher-order PKM skills that relate to the advanced management of an individual’s personal knowledge structures and artifacts. A learning design framework with specific, practical examples is included to provide guidance for those seeking to plan learning activities aimed at developing students’ PKM skills.

Chapter 7 reports on the application of a connectivist (Siemens, 2005) approach to create authentic learning spaces for teaching Web 2.0 concepts in a freshman (first-year) college-level information technology course. Drawing on his experience teaching students both about and using Web 2.0, the author makes a number of valuable suggestions in relation to good practices for fostering learning by using Web 2.0 tools to create connections between people, ideas, and technology. The chapter shows how, by integrating collaborative and social media applications in authentic learning environments and creating opportunities for students to become both consumers and producers of classroom materials, students can experience and become immersed in the “culture of participation” that lies at the heart of Web 2.0.

Chapter 8 illustrates how the blog can be a useful repository of information and resources, in addition to serving as a platform for the synthesis and presentation of ideas to a public audience. Blogs in higher education can also facilitate the creation of an online community where academic events are flagged,
resources and shared research are advertised, and ideas and comments are exchanged. The authors report on an empirical investigation into the self-motivated course-related blogging activities of undergraduate and Master’s students, and research-related blogging activities of doctoral students. The chapter demonstrates how blogging may be used to assist students in developing and honing study and research skills, as well as how writing in the public domain can encourage networking, commitment to goals, and articulation of research ideas, thus cultivating confident writers capable of critical and reflective thinking.

Chapter 9 tells of how wikis were used to support the development of professional practice in an initial teacher training program at a British university. Student teachers undertook blended learning activities and used a course wiki to augment and support face-to-face sessions, employing it both as a repository to store and retrieve their work as well as a discussion space to engage in dialogue with peers and tutors outside the classroom. This illustrates both the personal and social dimensions of learning with Web 2.0 tools, and is an excellent example of how collaborative content creation, review, and editing that are hallmarks of Web 2.0 can be integrated with pedagogical approaches to provide useful scaffolding and support in professional learning. The author also shares with readers the five-stage framework that was used to structure the student teachers’ wiki-based activities.

The authors of Chapter 10 introduce the concept of “Mobile 2.0,” which entails the convergence of Web 2.0 and mobile technology—for example, social networking via an Internet-capable cellular telephone or “smartphone,” or photo sharing on a mobile blog—and suggest strategies to integrate such informal activities into formal learning and teaching. The chapter begins with an analysis of the practical challenges and barriers that educators and institutions face in the adoption of mobile tools and resources for tertiary education purposes. Drawing on data from interviews with six experienced tertiary teaching practitioners, the authors describe and analyze a number of examples that point to the particular power of mobile learning (m-learning) to blur the lines between study and other aspects of learners’ lives, which can have both positive and negative consequences. The chapter encourages educators to look beyond the hype around technological advances in mobile devices and connectivity to focus on the opportunities that exist to use the distinctive affordances of Mobile 2.0 in productive ways to meet the needs of learners.

Chapter 11 examines the use of wikis in conjunction with other text and voice-based web applications to support collaborative writing. The authors studied the writing processes of Spanish foreign language learners who were working collaboratively using wikis to complete an essay assignment. It was observed that students maintained an interest in accuracy as well as a focus on global rather than local aspects of their writing outputs. In addition, the combination of wikis and synchronous chats gave students a platform on which to state a clear thesis, provide supporting evidence, and work on the organization of the essay in a manner often missing in individual work. The chapter provides advice in terms of pedagogical strategies, supported by social software tools, which can be used to help students become better writers in their second language.

An exploration of how podcasting can be used to support and enhance the student experience forms the topic of Chapter 12, with an emphasis on tertiary-level distance education contexts. The chapter critically examines the unique features and attributes of podcasting that distinguish it from older audio-based educational technologies. By surveying the literature to identify innovative practices of educators across the globe in the use of both student- and instructor-generated podcasts, four thematic areas representing the benefits of podcasting for distance e-learning and blended learning are exemplified: increasing learner motivation and engagement, facilitating and enhancing learning outcomes, supporting mobility and lifestyle learning, and fostering a sense of community.
Chapter 13 provides an overview of the nexus between student learning and student engagement outside the classroom, and explores how Web 2.0 tools can be used in creative ways to support non-teaching areas (such as libraries, guilds, student services, and other bodies) in a university. It highlights the role of non-teaching units in contributing to student satisfaction, and shows how this can be supported through the establishment and maintenance of online communities using social software. The chapter uses a case study of a specially designed project to demonstrate issues and challenges, and offers recommendations for staff, including advice on establishing a successful Web 2.0-based online community within a university.

Chapter 14 addresses the question of whether or not, and if so how, the use of LMSs can be reconciled with the Web 2.0 ethos. Drawing on examples and anecdotes from the authors’ institution, an Australian university that operates primarily as a provider of distance education, the chapter explores options for integrating Web 2.0-based e-learning tools, technologies, and strategies with LMS-based pedagogy. The authors reason that the goals and ideals of Web 2.0 and Pedagogy 2.0 (see Chapter 3) can be realized, or at least stimulated, within an institutional LMS environment, provided concrete steps are actually taken to align the environment with the desired goals and ideals.

In Chapter 15, the author looks at the emergence of social networking systems and applications and their impact on tertiary education, through an analysis and exploration of one such application, namely the popular website Facebook. He highlights the educational possibilities, problems, and pitfalls of incorporating Web 2.0 social network structures in teaching approaches, as well as putting forward suggestions for the effective exploitation of these emergent social networks to enhance student learning.

The authors of Chapter 16 report on a project in which Web 2.0 technologies were introduced to students purportedly belonging to the so-called “digital native” generation. They present the results and findings of studies critical of the generational metaphor, and argue against stereotyping and taking as given unsubstantiated claims or assertions about particular groups of students. Instead, the authors posit that young people may need to develop skills often associated with the digital natives to prepare them for work and life in our increasingly connected and networked world. They observe that often, students need and desire more support and structure than what is assumed within an academic context. The chapter ends with a recommendation that educational uses of social software technologies be more strongly and explicitly connected to curricular activities, which calls for a more concerted pedagogical effort and a higher degree of institutionalization.

Chapter 17 examines the role and importance of assessment in the Web 2.0-based e-learning era, explaining how Web 2.0 tools can be used to promote learner-centered assessment and “assessment for learning.” It presents a number of cases of peer, self, and other online or e-assessments that display a range of characteristics for the next generation of assessment tasks and strategies. The author concludes that in order for assessment activities and tools to become more effective in the digital age, they need to be embedded within solid pedagogical frameworks (a number of which are reviewed from the literature), which in turn require a supportive infrastructure that takes into account the key elements of tool development, staff training, rethinking of assessment tasks, and learning from assessment tasks.

Section 3: Web 2.0 and Beyond: Current Implications and Future Directions for Web-Based Tertiary Teaching and Learning

The authors of the four chapters in the final section of the book were specifically asked to adopt a forward-looking viewpoint so as to illuminate and project current implications and possible future directions
for web-based tertiary teaching and learning. Chapter 18 addresses a theoretical gap in the literature by scrutinizing the educational implications of the epistemological shifts associated with and/or brought about by the Web 2.0 movement. It returns to and builds on the idea, alluded to in Chapter 2, that in order for Web 2.0-based e-learning to be successful, there needs to be a degree of consistency between our own epistemic assumptions and those embedded in Web 2.0. The author argues that the new understanding of the nature of knowledge and learning as social rather than individual phenomena, which transcends Web 2.0 and will outlive any given set or suite of tools and technologies, has very different consequences for learning, teaching, and research, and for the ways in which tertiary teachers and their students approach the creation, dissemination, and validation of knowledge. The chapter concludes with strategies for critical engagement with the new epistemic learning space, and with questions to guide future research and practice.

Chapter 19 argues that while the current wave of Web 2.0 technologies has the potential to transform e-learning for the better, in order to realize this potential universities must rethink how they develop academics’ online teaching skills. The predominant emphasis on training academics to teach online using centralized LMSs has yielded mixed results; too much of the focus has been on “top-down” models of change, in contrast with the way in which Web 2.0 itself favors “bottom-up” approaches emanating from the grassroots, that is, approaches that leverage the power, ease of use, and flexibility of social software technologies. Such bottom-up approaches have a better chance of yielding the constructivist, student-centered pedagogy that is espoused by many but rarely implemented or enacted in online learning environments. Fictional accounts are used in an effort to capture and depict the issues involved and their implications for capacity and capability building of academic staff.

In Chapter 20, the author contemplates how the World Wide Web could change over the next 10 years into a situation increasingly referred to as “Web 3.0,” and how these changes might affect education. The term “Web 3.0” implies that Web 2.0 may not necessarily represent a revolution, but rather marks one step or phase in a continuous evolution of the Web and of social informatics at large (see also Murugesan, 2009). The chapter looks at how Web 3.0 concepts such as cloud computing, the Semantic Web, and the three-dimensional (3-D) Web are currently being explored and realized. A possible future online learning scenario is also described and analyzed to help envisage the possibilities for tertiary education.

Finally, the book’s concluding chapter, Chapter 21, revisits the fundamental characteristics of Web 2.0, and in light of the preceding chapters, attempts to place into perspective the implications for learners, teachers, and institutions. The author’s contention is that the impact of Web 2.0 on teaching and learning practice can be both positive and negative, and that consequently, educational institutions need to develop new, reactive and proactive policies and strategies. The chapter finishes with two approaches to making sense of and harnessing the power of the new technologies: the first involves applying Web 2.0 practices to facilitate greater dialogue and sharing of learning and teaching ideas; the second advocates greater use of metaphors as a mechanism for understanding Web 2.0 technologies in an educational context.

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