Preface

During the last 800 years, higher education has shown its sustainability, adaptability and transformable capability. Today there is increasingly a need to negotiate the complexities of the Information Age, which become more and more demanding as we are influenced by technology and the greater interconnectedness of nations and their peoples. Our new knowledge societies require more flexibility in their educational structures to adapt more readily to new styles of learning and teaching, new intellectual and social needs, and new levels of skills development. Such transformation is often referred as “The Learning Revolution” (Oblinger and Rush, 1997) and is taking place in a new era of global digital competition in higher education.

Critical research to date on the application of theory to e-learning practice has been epistemic in focus at times, but widespread and plentiful in addressing such issues as what is e-learning and e-teaching and how does online learning occur. Practical case studies abound in the literatures of learning technologies and e-learning in higher education. In the broad field of e-learning, research has demonstrated that problems have emerged in higher education practice because in many instances it is based on anecdotal evidence and minimal theory, there is a questionable validity of tests, a lack of control groups and objective learning measures, and difficulty in comparison of results across domains. Some of the identified research gaps at the beginning of the new millennium have been variations in tutor moderation, online debating, student perceptions of the e-learning environment, development of online learning communities, critical thinking and problem-solving applications in synchronous and asynchronous environments, peer tutoring and online mentoring, student retention, conceptual referencing and online collaboration (Bonk and Wisher, 2000).

However there remains a growing fissure: trying to determine whether or not good e-teaching, of any kind, supports or encourages good e-learning is a thorny issue. There is not a generic definition of good e-teaching that suits all contexts and student cohorts, primarily because the terms good ‘e-teaching’ and ‘effective student e-learning’ are subjective and context dependent. Applied e-learning and e-teaching in higher education cover multiple possibilities, including the interactions between the learner, teacher and a growing range of technologies available today. This book is a contribution towards a collective inquiry which pools experience, pinpointing gaps and indications of perceived needs in this large and sometimes blurred field. The themes in the book have emerged from the authors themselves, as they chose to write about issues that are pertinent to them as practitioners and researchers in higher education. Ultimately this book aims to provide directional choices for academics in higher education through the provision of guidelines shared by a variety of academics across disciplines. It is argued that the questions raised and the issues analysed in this book have become more urgent and pertinent in recent years for academic staff and those charged with providing flexible opportunities for their development. This book therefore makes a case for an analysis of key on-the-ground themes for academic staff and academic developers alike.
Each of the chapters in this book presents a number of strategies to assist the academic in coming to grips with one of the tensions facing them today in balancing the discourse and practice of student-centredness with an era of massification. Tied to this are the skills and experiences required by both staff and learners to make the successful transition to alternative learning environments. It has also been important to identify critical activities and actions which are required to facilitate this transition at higher education institutions. Undoubtedly, there have been high demands placed on both staff and learners to deal with these changes in education, influenced by the rapid development and implementation of information technologies. This is because not only does the Internet represent a revolution for the learner, it also represents a sea change in the way that learning is delivered and supported and the consequent skills and techniques needed by the lecturer (Duggleby, 2000). The professional debate, and emerging practice today, surrounding the use of the Internet as a teaching, and by association a learning and assessment tool seems to be putting academics under increasing pressure. In an age where the use of Information and Communication Technologies is almost regarded as essential to everyday activity, teachers are dealing with demands to adapt their teaching to accommodate the new technologies. Discussing the development and delivery of online summative assessment, the chapter by Heather Rai and Simon Wilkinson also converses on the roles and responsibilities of key stakeholders involved.

Much has been written about the use of such technologies impacting not only on the ways in which staff teach but also on the ways in which learners learn. There remain significant numbers of staff and learners who are not adequately prepared or equipped to operate effectively in emerging alternative learning environments, particularly those environments which are technologically mediated. The chapter by Louise Jakobsen presents e-learning as an organisational culture change and suggests a way of implementing it. The adoption of learning technologies as everyday teaching tools has been placing pressure on academic staff; for some, using e-learning to deliver instruction is forcing them to rethink the ways in which they teach and learners learn, a theme mentioned by many of the authors. They are beginning to acknowledge that transferring the teaching techniques they have used in the past to an e-learning environment does not necessarily provide satisfactory results.

Indeed the authors in this book point out the advantages of e-learning environments for facilitating new student-centred ways of learning. This is the central issue of the chapter by Richard Walker and Walter Baets. The chapter by Ann Donohoe, Tim McMahon and Geraldine O’Neill and separately that by Nick Pratt focus on reflection in work-based learning. Steve Millard, in his chapter, looks at online role-play, not only as preparation for assessment but also as a way of encouraging the development of transferable skills such as information seeking, reflection and perspective taking. In Ursula Wingate’s chapter, the potential of e-learning for reflection on epistemological issues and new ways of learning are discussed. Morag Munro and Barry McMullin examine how the use of technology in higher education can improve accessibility for all students. They also illustrate how design can make material inaccessible. This is echoed in the chapter by Catherine and David Matheson.

This book has also provided an ideal opportunity to explore key issues in professional academic development provided by the current movement towards increased use of e-teaching and learning technologies and the emerging field of online pedagogies, where future possibilities are largely unknown, and traditional notions of development may no longer be appropriate. Whilst this may offer particular threats to established beliefs and values within many disciplines, it can also help meet the demands from academics and institutions for increased flexibility in modes of teaching and learning. This research is an opportunity to problematise the very notion of “academic development”. Many of the chapters include this issue. For example, Diana Kelly’s chapter looks at academic development in preparation for eTutoring; Tony Cunningham et al. discuss the experiences of being e-learners and how this can transfer to an e-tutoring role; Catherine Manathunga and Roisin Donnelly write about the potential of
an international dimension to academic development programmes. Academic development suggests that the main focus is the development of skills and knowledge in individuals, and that the change is about changing academics; this research proposes that what needs to be explored is the engagement of academics in negotiating the process of change happening in their teaching environment, and as part of their everyday practice of adapting to change.

This book will outline ways in which the discussion around e-learning academic development for academic staff can be broadened to include a more critical, more effective approach to design and implementation. A further issue worthy of exploration concerns the nature of effective academic e-learning development. It is suggested here that understanding the nature of academic work in e-learning and e-teaching is critical if we are to understand today’s higher education environment. As higher education has expanded, and more attention has been given externally to its quality, higher education institutions have naturally begun to devote more attention to the academic development function. This growth in academic development has been reflected in the establishment, in many institutions of higher education globally of centres for academic practice, staff development, learning and teaching, and a myriad of other titles. The challenge for those charged with developing teaching in higher education is to engage academics in a discourse of teaching and learning. Rowland (2005, p8) suggests that there is a lack of correlation between effective teaching and effective research, and believes this is likely to be the result of the weakness of a culture of enquiry (in both teaching and research) in higher education. Such a culture requires learning, teaching and research to be mutually enhancing.

Does effective academic development result in improved e-teaching or blended learning which in time leads to enhanced student learning outcomes? Chapters in this book illuminate these questions, and the studies outlined may contribute towards a better understanding of the emerging conceptions and practical approaches used by academic staff and e-learning developers. It important to foster a lecturer’s increasing knowledge of effective pedagogical practices for successful e-learning, and this is most effective when the lecturers who are starting out as online educators can experiment and develop their skills in a safe and reliable environment.

The intention throughout the book has been to provide an overview of relevant components of e-learning theories rather than give a complete exploration of such theories. However the research reported by various authors does provide discussion of a variety of theories and pedagogical strategies, for example the chapter by Timo Portimojärvi and Pirjo Vuoskoski explores the use of problem based learning in learning about and developing leadership skills. Pankaj Kamthan argues for the combination of teacher-led (objectivist) and student-led (constructivist) learning to fuse student learning in and outside the classroom. It is hoped that future research will utilise the analysis and arguments presented here to contribute to further research in the field.

There appears to be a mutually sustaining cycle of reaction to the benefits of e-learning in higher education. Although online instruction is seen by many as a major breakthrough in learning and teaching, it has had its share of critics who do not believe it can actually solve difficult learning and teaching problems and who consider that many barriers hinder effective e-learning. Critics of e-learning have regularly noted that there is little evidence of its ability to improve learning outcomes, despite substantial worldwide investment in its development, and its wide uptake. Even when research about e-learning has been published showing that it is effective, or at least no less effective than other approaches, misgivings are held about the validity of that research.

A persistent challenge for higher education is to promote the development of highly complex knowledge structures, generic skills as well as transferability of knowledge and skills to future professional work. Emphasis is given today to problem-solving, team work, oral communication, the search for information from multiple sources and self- and group-directed initiatives. As e-learning is introduced into academic
teaching, expectations arise as to how new learning technologies will contribute to this end. Issues that are educational in nature – such as sustainable content management (particularly discussed by Pankaj Kamthan as well as Gordon Joyes and Sheena Banks), sound pedagogical strategy, and learner support – can all too often be left at the periphery. An interesting component of research into the application of e-learning and e-teaching is the exploration of the role of the tutoring process as a central instructional strategy, integrated fully in everyday learning and teaching in institutions, in contrast to current practice that regards online tutoring as a tangential activity. In their examination of the changing role of the tutor to an eTutor, Rhona Sharpe and Jill Pawlyn provide valuable information about the key differences.

In fact, technology often puts teachers in the role of learner alongside their students. This represents a big change from the traditional role of the teacher as the one with all the knowledge and right answers. Instead, students are given the chance to see their teachers perhaps acquire a new set of skills. Teachers who are not threatened by this change in roles report that the experience sensitizes them to the learning process in unexpected ways, giving them new insights into their students as learners. Engaging in the process of exploring technology with their students further provides teachers with an opportunity to demonstrate aspects of problem solving and learning that are rarely made visible in more product-oriented classrooms. Technology-supported constructivist approaches are particularly energy-intensive for teachers who themselves have not been taught in this way and who need to acquire both the pedagogical and the technological skills required. Even when they have mastered the needed skills, many teachers find it difficult to sustain constructivist teaching approaches over time.

In addition to the role of the eTutor is the part played by the educational technologists in creating viable online learning resources. The first chapter, by Sabine Little, considers the role of the e-learning developer, in particular as part of a multi-disciplinary team. Today, there is an ever-increasing wide range of e-learning technologies available for the more traditional teaching and learning strategies; amongst others there are games, simulations, social networking tools, learning portals, learning object repositories, knowledge management tools, learning content management systems, Blogs, Moblogs, Vlogs, PodCasting, Wikis, ePortfolios. As highlighted earlier, the technologies that have revolutionized information exchange and enabled distributed learning continue to change at a rapid pace and influence advances in e-learning. Many studies have noted a relative emphasis on training in the use of technology at the expense of academic development that focuses on pedagogy and embedding technology into learning and teaching practices (McNaught, 2000), a point that is taken up by some of the authors in this volume.

However, as discussed in the chapters by Nick Pratt and Ann Donohoe et al. the key to understanding how telecommunication technologies can enhance learning is to realise that the use of interactive telecommunication technologies alone does not ensure that meaningful interaction will occur. Two-way communications, whether synchronous or asynchronous, do not necessitate meaningful interaction. Adding a discussion forum, scheduling a few chat sessions, and using email will not lead to meaningful interactions. Nor do streaming media and animated graphics guarantee interaction. In order for interaction to be meaningful it must enhance student performance and/or the learning experience. The technology itself enables various types and levels of interaction, whereas learning theory provides insight as to how and when these tools should be used to enhance learning. This is why an understanding of underpinning learning theory and pedagogical principles is vital.

The growth of e-learning requires the development of new instructional strategies that promote an interactive collaborative learning environment. Unfortunately many novice teachers find it difficult to plan and manage meaningful e-learning interactions. When a teacher’s repertoire of instructional strategies is limited to teacher-directed methods, they can end up relying heavily on self-instructional text or lecture-based materials, failing to promote meaningful interactions among students, the instructor and
content (Hirumi, 2002). Of course the real problem is that insufficient time, training and resources forces educators to revert back to what they know: teacher-directed instructional methods.

The challenge for education, then, is to design technologies for learning that draw both from knowledge about human cognition and from practical applications of how technology can facilitate complex tasks in the workplace. These designs use technologies to scaffold thinking and activity. Computer scaffolding enables learners to do more advanced activities and to engage in more advanced thinking and problem-solving than they could without such help.

When students use technology as a tool or as support for communicating with others, they are in an active role, rather than the passive role of recipient of information transmitted by a teacher, textbook, or broadcast. The student actively makes choices about how to generate, obtain, manipulate, or display information. Technology prompts students to actively think about information, making choices, and executing skills in a manner that is not typical in teacher-led lessons. Each student can be involved in independent or small-group work with the technology. Moreover, when technology is used as a tool to support students in performing authentic tasks, the students are in the position of defining their goals, making design decisions, and evaluating their progress.

McConnell (2006) argues that, surprisingly, there has been little research looking at what actually happens in online learning communities: to date, we know very little about how they are formed, how members negotiate shared meanings about the nature of the community, how they work in the community and how the dynamics of learning in communities are controlled and what the effects of this are for those involved. We also know very little about the eventual outcomes of learning communities, and how members work together to produce meaningful learning outcomes. The chapter by Cunningham et al. sheds light on this from a practitioner perspective.

All told, exploring applied e-learning and e-teaching is a challenging area. It is essential that all academics willing to engage in this process acknowledge that they too are learners and will need to engage in ongoing reflection on their teaching and learning practices. Taking a reflective pause regularly is important, and taking time out from busy practice to write a chapter, each author in this book has been offered just that. We believe that the result has been worthwhile.

**STRUCTURE OF THE BOOK**

The book is divided into four sections, each focusing on a theme relating to applied e-learning and e-teaching. The first section, *The Partners in the e-learning and e-teaching Process And The Role of Academic Development*, contains chapters which examine e-learning and e-teaching from the viewpoints of the developer, the tutor and the students as well as examining academic development.

The emphasis in Section II is on accessibility, examining it in a broad context as well as with regard to the use of multi-media in higher education as a way of improving accessibility.

The chapters of Section III all focus on designing for e-learning and e-teaching, looking at various issues and subject disciplines. The potential of e-learning for student induction, the use of e-learning for class-based and independent student learning in software engineering and the development of an online resource for learning about research are the subject matter of the first three chapters. The use of e-learning tools to support knowledge building, discourse, reflection and collaboration among learners in management, nursing and teaching education is dealt with in Chapters XII, XIII and XIV. Chapter XV looks at the partnership between problem based learning and technology in developing leadership skills in the field of health care.
Section IV concentrates on the area of online assessment. The first chapter here looks at role play as a way of preparing for discursive forms of assessment while the second chapter describes the process of developing and administering summative assessment online.

REFERENCES


