Preface

Introducing change in higher education has never an easy nor a swift process. For almost two decades, information and communication technologies have been vaunted as the herald of a new age in learning, transforming both the traditional classroom and breaking down the barriers to education. The ubiquitous availability of information via the World Wide Web, facilitated by the rapid development of tools to harness, adapt and interact with this information, is welcomed by educators in theory. But in practice it has put many out of their comfort zone, especially those whose confidence in the online environment is not equal to that which they feel at the front of a classroom. For such people involved in higher education, technology was (and for some perhaps still is) regarded as a threat rather than an opportunity. And in many ways it is not difficult to see why: when the technology was merely a concern of the business processes of an institution, facilitating the registration and payroll functions, it did not impinge directly on the actual practices of teaching and learning. The subsequent advent in the 1990s of learning management systems (in Europe known as virtual learning environments) was often seen as an attempt to encroach on the traditional privacy of the classroom and lecture theatre. With this tool, the skills of the lecturer were of necessity going to have to expand to include design of materials for delivery on the web, the ability to facilitate online communications with ever-more demanding students, to change their presentation style in order to satisfy shortening attention spans and at the same time to ensure that learning is taking place to the standards required by an exacting quality-assurance regime. Students, it seemed, were being put at an advantage: not only are they regarded as being more confident with new technologies, the technologies themselves were seen as empowering and emboldening students in a way that many of their lecturers were not. And in some cases the the position of lecturers themselves was seen to be at risk. The change was not always for the good.

However, such change must be seen as but a first (and indeed necessary) phase in the overall evolution that is happening within higher education. Alongside the fear of change there have been many good stories to tell. *Critical Design and Effective Tools for E-Learning in Higher Education: Theory into Practice* represents an attempt to gather some of those stories into a single handbook which can provide those who work in higher education with both a source of information and inspiration. Here, the thoughts of almost 40 professionals from across the English-speaking world share their theoretical and practical perspectives on the impact which technology is having, could have and should have on the learning experiences of our future graduates. Richard Katz’s preface provides a good overview of many of the emergent themes, and the contributions are divided into three parts which, we believe, reflect the concerns of many of us at this phase of development.

In Section 1, entitled “Critical Design for e-Learning”, we have gathered some of the contributions that offer a critical look at the bigger picture of e-learning, both from a theoretical and a practical perspective.
Thus with begin with an attempt to promote a more collaborative approach to learning. John Casey’s appreciation of diverse approaches to design in higher education proposes a combination of pedagogic and generic design knowledge as a means to reverse the current dominance which technology tends to play in almost all discussions of e-learning. An e-learning specialist working in Scotland, he helpfully suggests further areas of interdisciplinary enquiry and development which the reader may find useful. Next, Kay MacKeogh, Seamus Fox and their colleagues at Dublin City University take a close look at the concept of identifying and measuring student learning outcomes, while maintaining a realistic eye on lecturer workload. Drawing from their experience in the field of distance education, they explore ways in which online pedagogical techniques can be designed to provide solutions to the challenge of clearly demonstrating that students are achieving the intended learning outcomes, both with a fully online and a blended environment. The non-personal world of the online environment is often a concern for lecturers, who may worry about issues such as appropriate online behaviour, etiquette, impersonation and so on. Just how the online environment impacts on student identity and behaviour is the subject addressed in the following two chapters. In “Online identities in virtual worlds” Andrew Power and Gráinne Kirwan from the Institute of Art and Design in Dun Laoghaire, Dublin, acknowledge that online identities do not necessarily reflect the true identity of the user. They identify strengths and weaknesses of online identities in education, and describe implications for practice. Noel Fitzpatrick and Roisin Donnelly next explore how higher education teachers use digital media to manage interpersonal interaction in online courses. At a theoretical level, issues of meaning-making, shared beliefs and intercultural differences come to the fore, while at a practical level they discuss issues such as turn-taking and the sequential analysis and organization of virtual communications. Section 1 concludes with a discussion of educational technology, innovation and habitus by Larry McNutt, a lecturer in information technology. This chapter involves a review of what we mean by educational technology itself, and takes a broad look at the characteristics of innovators in other domains before considering how applicable their experiences may be considered to education.

In the second section, we look at particular technologies and their implementation in the context of the web 2.0 phenomenon. The aim here is to offer insights into strengths and weaknesses of particular pedagogical approaches to the use of tools rather than providing a how-to guide to the actual tools themselves. To that end, the section opens with an exploration of the emergence of wikis in higher education. Catherine Bruen and her co-authors employ case studies to illustrate the use of wikis to support learning, focusing on evaluating the effectiveness (or otherwise) of wikis to create online communities to support knowledge management, development, retention and transfer. The chapter concludes with a review of the emergent themes and offers a series of recommendations relating to the effective establishment, design, management and use of wikis to support knowledge creation and collaborative enterprise. The effectiveness of digital games in the learning process is next explored: Gearóid Ó Súilleabháin and Julie-Ann Sime from Cork Institute of Technology hold a question mark over much of the research surrounding the effectiveness of computer and video games in promoting learning transfer. They discuss the design of games for learning, and advocate further research into the learning processes underlying the game-play behaviour of expert and habitual gamers. Such work suggests a new epistemological framework which will permit designers and educationalists to take the first steps in creating and adopting more effective games for learning.

While plagiarism is not a new phenomenon, the internet has certainly put it higher on the agenda within the higher education sector. Angelica Risquez from the University of Limerick argues that the pedagogical and institutional practices underpinning the use of anti-plagiarism software applications
remain largely unexplored. She suggests best practices for educators in order to help them to use such software in a proactive, positive, and pedagogically sound ways. Eugene F. M. O’Loughlin from the National College of Ireland examines the impact which hand-held technologies such as Apple’s iPod/iTouch/iPhone might have on higher education. The iClassroom, he believes, will lead to at least a re-view of traditional pedagogical practices and may suggest new forms of pedagogy for the digital age. His recommendations include an increased emphasis on evaluation, usage of models for developing content, and an inclusion of such mobile devices as part of an overall architecture for any mLearning strategy within an institution. The increasing popularity of ePortfolios is addressed by Virginia Tech’s C. Edward Watson, Marc Zaldivar and Teggin Summers, who outline the challenges which they bring to higher education, such as academic assessment requirements, specific teaching and learning goals, and emerging student professional development needs. These three applications of ePortfolios are used to provide administrators and lecturers with the information needed need to make informed decisions regarding the introduction of ePortfolios in academic settings. Taking a slightly different approach, Jennifer Bruen and her colleagues focus on the development of an electronic version of a European Language Portfolio, and its integration into a study and research skills module for first-year students at Dublin City University. Building on the success of their venture, they identify issues which remain around design and integration of ePortfolios into an academic programme. Section 2 concludes with Jamie Wood and Martin J. Ryan’s exploration of the utility of Web 2.0 technologies for supporting independent inquiry-based learning, with a particular focus upon the use of blogs and social bookmarking tools. Drawing on case studies at two UK Universities, they evaluate the positive impact of the use of Web 2.0 on student learning (and the drawbacks encountered), which encouraged students to conduct independent research outside of class and generated significant interactions between students and their peers as well as with tutors.

In Section 3 we have gathered together a series of practitioner insights, from the perspectives of both learning and teaching. Damien Raftery describes his experiences of developing educational screencasts, holding that they have the potential to enable learning in new and exciting ways. He outlines a four-step process for creating pedagogically-sound screencasts and discusses future research directions. Librarian Jamie Ward employs a case study to demonstrate that student information literacy can be enhanced through the combined use of an institutional virtual learning environment, with some amalgamation of problem-based and blended learning techniques. In their chapter entitled “eMentoring, a Case Study in Effecting Cultural Change” Barbara Macfarlan and Richard Everett describe a scheme whereby teenage students teach their teachers how to make appropriate use of electronic resources in the classroom. They believe that this model has been an effective element in a concerted approach to changing the prevailing attitudes to designing pedagogy for twenty-first century learners, and they outline a strategy for ongoing staff development and support. Eileen O’Donnell, a lecturer in Information Technology and Business Information Systems, examines learning from the student perspective by surveying student attitudes. The responses received clearly indicate that the use of technologies in higher education beneficially transforms learning, but will never replace lecturers. In essence, the benefits that can be achieved through the use of technologies are totally dependent on the ways they are employed pedagogically by lecturers. Next, Yvonne Cleary explores the development of online support for writing skills on a technical communication module taught at the University of Limerick. She outlines the types of writing problems most commonly identified by students and instructors, and posits online support as an intervention which facilitates autonomous learning. She further suggests related research opportunities, especially in the area of using Web 2.0 technologies to foster autonomy.
The design of a reusable digital learning resource for teaching Japanese forms the basis of the contribution by Ann Marcus-Quinn and Barbara Geraghty. Their chapter describes the collaborative design and development process in terms of roles, resources and user requirements. The positive features of more traditional teaching methods are combined with the advantages of mobile learning, facilitating autonomous learning on demand. The chapter also discusses the role and development of digital repositories in Higher Education. Judith A. Kuit and Alan Fell hold that, despite the extensive use of technology in teaching and supporting learning, teaching methods and approaches have remained largely unchanged. However, today's students appear to have a different approach to learning and certainly have different expectations to their predecessors regarding the use of technology in learning. The new learning paradigms of connectivism, navigationism, pedagogy 2.0 and heutagogy are described and discussed in the light of the role of academic staff. This is a role supported and enabled by the technology, particularly with respect to the Web 2.0 social networking tools. Applying a community of practice model to Web 2.0 academic development programmes is the basis of the contribution from Paul Gormley, Catherine Bruen, and Fiona Concannon. They argue that the sustainable integration of effective e-learning practices into higher-education establishments remains a major challenge both at organisational and local levels. Their chapter presents a practical example how a model of staff engagement was implemented within an Irish university, and concludes with suggestions on how others may benefit in considering a similar approach. Finally, Pat Gannon-Leary and James Carr discuss the strategic deployment of e-learning in higher education, holding that the introduction of new technologies requires management of complex change processes to deliver their full potential. The management of change in organisational practices, they argue, involves attention to processes, people, and culture, and as active participants in a number of e-learning initiatives they present a longitudinal study of one such institution. They suggest that new evaluation frameworks may help with engaging academics in thinking about how to embed e-learning successfully within courses, and at a broader level within the organisation. Overall they conclude that e-learning in higher education is likely to develop more slowly than we had imagined owing to the complex nature of technology implementation that is common to both industry and education alike.

Overall, the book aims to give a ground-level picture of e-learning as it is currently being practised in Ireland, the UK and the USA. It is not our intention that this book should be diligently read from cover to cover: rather, those who gain most from this book are likely to find different parts of it relevant at different times and in different situations. To that end, we have enjoyed the process of gathering these experiences to share with readers across the world, in the hope that they will offer you some guidance and insight into what has been happening over the past two decades. Above all we hope that this book will inspire readers to look with confidence towards the future of e-learning in higher education and, as Richard Katz urges in his preface, become an activist in the cause of integrating technologies into your teaching and learning practices. Together we can actively make a change for the better. But if we are ever going to change the world, each of us needs to start in our own classrooms.

K.C. O'Rourke
23 November 2009