Preface

Inspired by the emerging field of Software Studies (Fuller, 2008; Kitchin & Dodge, 2011; Manovich, 2013), this book aims to introduce the notion of 'software literacy' as an emerging area of research and practice for educators, researchers and policymakers. As a cultural artefact, software plays a role in reproducing, reinforcing and augmenting existing cultural practices, as well as generating new practices (Manovich, 2013). Software platforms, such as Facebook and YouTube, operating systems such as iOS software in iPhones and iPads and everyday applications such as the Microsoft Office suite are just some examples of how software has become embedded in everyday personal and professional pursuits. The role that software plays in our lives is however largely unacknowledged and invisible. The notion of software literacy directs attention to this influence. Developing a critical software literacy is, we argue, an essential part of learning and living in the twenty-first century, and a capacity that transcends the use of any particular software tool and any particular educational, social and cultural context.

Although our focus is primarily an educational one, our argument has implications for any field that makes use of software and information and communication technology (ICT) systems and applications. The book will be of interest to those engaging with the challenges and opportunities involved in software-based teaching and learning, and to people who are interested in how software impacts on the workplace and leisure activities that are part of our day-to-day lives.

The book sets out findings from our two-year university-level study, which is one of the very few studies that have investigated the nature and development of software literacy. Specifically, it provides case studies of software use and literacy demands in university-level engineering, and screen and media studies courses. The views of lecturers and students are presented—student views are mapped over their full programme of study to illustrate a possible framework for the development of software literacy.

The cases provide a forum for our elaboration of the tensions and productive exchanges between the pragmatic and creative potential of software use. They illuminate how the nature and use of software are entangled with the history of the two disciplines. Just as importantly, they illustrate how software shapes and is part

of student opportunities to learn and the learning networks that span formal and informal activities inside and outside the 'classroom'.

The book concludes by asserting and scoping the need for the general population to be software literate and for professionals within software-based disciplines to be critically aware of the way their choice of software enables and constrains their actions and informs their creative imagination.

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