

Palgrave Macmillan's Digital Education and Learning

Much has been written during the first decade of the new millennium about the potential of digital technologies to produce a transformation of education. Digital technologies are portrayed as tools that will enhance learner collaboration and motivation and develop new multimodal literacy skills. Accompanying this has been the move from understanding literacy on the cognitive level to an appreciation of the sociocultural forces shaping learner development. Responding to these claims, the **Digital Education and Learning Series** explores the pedagogical potential and realities of digital technologies in a wide range of disciplinary contexts across the educational spectrum both in and outside of class. Focusing on local and global perspectives, the series responds to the shifting landscape of education, the way digital technologies are being used in different educational and cultural contexts, and examines the differences that lie behind the generalizations of the digital age. Incorporating cutting-edge volumes with theoretical perspectives and case studies (single-authored and edited collections), the series provides an accessible and valuable resource for academic researchers, teacher trainers, administrators and students interested in interdisciplinary studies of education and new and emerging technologies.

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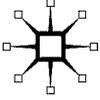
Digital Skills: Unlocking the Information Society

By Jan A. G. M. van Dijk and Alexander J. A. M. van Deursen

Digital Skills
Unlocking the
Information Society

*Jan A. G. M. van Dijk and
Alexander J. A. M. van Deursen*

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DIGITAL SKILLS

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Series Foreword

Much has been written during the first decade of the new millennium about the potential of digital technologies to radically transform education and learning. Typically such calls for change spring from the argument that traditional education no longer engages learners or teaches them the skills required for the twenty-first century. Digital technologies are often described as tools that will enhance collaboration and motivate learners to reengage with education and enable them to develop the new multimodal literacy skills required for today's knowledge economy. Using digital technologies is a creative experience in which learners actively engage with solving problems in authentic environments that underline their productive skills rather than merely passively consuming knowledge. Accompanying this argument has been the move from understanding literacy on the cognitive level to an appreciation of the sociocultural forces shaping learner development and the role communities play in supporting the acquisition of knowledge.

Emerging from this context the Digital Education and Learning series was founded to explore the pedagogical potential and realities of digital technologies in a wide range of disciplinary contexts across the educational spectrum around the world. Focusing on local and global perspectives, the series responds to the shifting demands and expectations of educational stakeholders, the ways new technologies are actually being used in different educational and cultural contexts, and examines the opportunities and challenges that lie behind the myths and rhetoric of digital age education. The series encourages the development of evidence-based research that is rooted in an understanding of the history of technology, as well as open to the potential of new innovation, and adopts critical perspectives on technological determinism as well as techno-skepticism.

While the potential for changing the way we learn in the digital age is significant, and new sources of information and forms of interaction have developed, many educational institutions and learning environments have changed little from those that existed over one hundred years ago. Whether in the form of smartphones, laptops, or tablets, digital technologies may be increasingly ubiquitous in a person's social life but marginal in their daily educational experience once they enter a classroom. Although many people increasingly invest more and more time on their favorite social media site, integrating these technologies into curricula or formal learning environments remains a significant challenge, if indeed it is a worthwhile aim in the first place. History tells us that change in educational contexts, if it happens at all in ways that were intended, is typically more "incremental" and rarely "revolutionary." Understanding the development of learning technologies in the context of a historically informed approach therefore is one of the core aspects of the series, as is the need to understand the increasing internationalization of education and the way learning technologies are culturally mediated. While the digital world appears to be increasingly "flat," significant challenges continue to exist, and the series will problematize terms that have sought to erase cultural, pedagogical, and theoretical differences rather than understand them. "Digital natives," "digital literacy," "digital divide," "digital media"—these and such mantras as "twenty-first-century learning"—are phrases that continue to be used in ways that require further clarification and critical engagement rather than unquestioning and uncritical acceptance.

The series aims to examine the complex discourse of digital technologies and to understand the implications for teaching, learning, and professional development. By mixing volumes with theoretical perspectives with case studies detailing actual teaching approaches, whether on or off campus, in face-to-face, fully online, or blended learning contexts, the series will examine the emergence of digital technologies from a range of new international and interdisciplinary perspectives. Incorporating original and innovative volumes with theoretical perspectives and case studies (single-authored and edited collections), the series aims to provide an accessible and valuable resource for academic researchers, teacher trainers, administrators, policymakers, and learners interested in cutting-edge research on new and emerging technologies in education.

Digital Skills: Unlocking the Information Society is a timely intervention in the debate about digital literacy and the digital media skills required by people living in today's information society. Preferring the broader term "digital skills" to the more popular "digital literacy" and "information literacy," the book discusses the significance of the social and psychological factors

that influence user motivation vis-à-vis digital media. Indeed, digital skills better describe the types of interaction, performance, and communication required in addition to the knowledge implied by the term “digital literacy,” to survive and develop in an information-rich society in which transactions take place immediately and in a variety of channels.

One of the book’s main contributions is the way it identifies a framework of six key aspects under the general heading of “digital skills.” These include operational skills (referring to technical competence), formal skills (such as those relating to browsing), information skills (related to searching, selecting, and evaluating information), communication skills (dealing with messaging, tweeting, and using various communication channels in online environments), content creation skills (referring to user-generated content, particularly in a Web 2.0 context), and strategic skills (content-related skills that allow people to use digital media for a particular goal).

Applying their historical understanding of the information society, the authors argue that today’s web users require more than merely technical skills in order to function effectively. While interfaces have simplified interaction, additional skill sets are needed in order to truly take advantage of the opportunities presented by digital media. One of the most powerful aspects of the book is that it situates digital skills within a social context. Based on this positioning, education emerges as not the only way to improve digital skills; preventive measures and strategic policy choices can also contribute in meaningful ways to advancing developments in this field.

Digital Skills: Unlocking the Information Society is a clearly written and concise addition to the literature on the contemporary digital-divide and digital-literacy debates and makes important contributions to our understanding of the social context of these practices. It is acutely aware of the risks of allowing second-level digital divides (those focusing on skills gaps) to continue and in giving too much priority to the question of access to digital technologies. The book acts as a counter to this bias and highlights the consequences of allowing an “information elite” to develop at the expense of policies that aim to support diversity and equality of opportunity. Effective digital education and learning is still based on confronting these divides and while digital technologies have made content creation and generation easier than ever before, significant barriers continue to exist. The book will help practitioners, researchers, and policymakers to address the key questions and to develop a more finely grained analysis of this important debate.

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 MICHAEL THOMAS
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Overview of the Book

The first chapter of this book defines digital skills as a crucial phase in the appropriation of digital technology. A framework of six digital skills is introduced: two medium-related skills consisting of operational skills (technical skills to command digital media) and formal skills (browsing and navigating, above all, on the web) and four content-related skills consisting of information skills (the ability to search, select, and evaluate information in digital media), communication skills (the ability to communicate on mostly the Internet), content creation skills (the ability to generate content), and strategic skills (using a digital medium as a means for a particular personal or professional goal). Such contemporary digital skills are just the latest media skills people have developed. Chapter 1 provides a snapshot of skills in history to show that an expanding and cumulative number of skills have appeared and that an ever larger section of the population requires these skills.

Chapter 2 describes the detailed framework of six digital skills when applied to the Internet. This framework is our main contribution to the field of digital literacy, competencies, skills, or whatever other term readers prefer. It addresses both scholars and practitioners. The framework is detailed and made operational so that it can be used in empirical research.

After making a firm basis of the digital skills subject and proposing a skills framework, in chapter 3 we discuss the social contexts of the use and skills of digital media, and whether digital skills are actually a problem for people and society. We will list a number of fields of participation in society (e.g., economy, politics, social, etc.) to describe the impact of digital skills. Then, the problem of a lack of digital skills can be better understood. Questions such as “Are unequal digital skills not simply a reflection of social inequality in general?,” “Has the print media not shown the same inequalities, for example, unequal skills in reading and writing proficiency?,” “Are

the traditional media not unavailable anymore for every information and communication need?,” and “Do people with a lack of digital skills not get sufficient support from others?” will be addressed.

After discussing the importance of digital skills, in chapter 4 the extent of the problem is estimated from empirical evidence. The proposed digital skills framework is applied in performance tests and surveys to determine digital skill levels of the population at large. What are the current levels of Internet skills of our framework among the population? All six types of skills will be carefully examined. Which social categories of the population show higher or lower levels of these skills?

Chapters 5 and 6 discuss the main solutions of the digital skills problem discussed in chapter 4. The main solutions are (1) improvement of technology design by making digital media more accessible or usable and (2) educational solutions. Chapter 5 is primarily addressed to designers and producers of technology. How can they help improve digital media? Is it possible to support users in intuitive ways so they do not have to learn much digital skills first? This would be the preventive solution. In chapter 6, the cure for less than perfect or unavoidable complex technology is offered: educational solutions of all kinds. This chapter will primarily appeal to teachers, coaches, and human resources officers and educational institutions. It will be argued that formal education, computer classes, and training are not the most frequently used ways to learn digital skills. The most frequently used ways are informal—learning by doing, trial and error, self-study, and asking for assistance. What are the advantages and disadvantages of formal and informal education in learning skills? What are the solutions currently practiced in regular schooling, adult education, and distance education? What educational tools and styles are offered for disadvantaged groups such as differently abled, illiterates, elderly, and migrant users?

The final chapter 7 summarizes the conclusions of the book and explores policy perspectives. Evidently, this chapter addresses not only the policy makers, but also the public opinion in general. Policy makers are governments, businesses, educational institutions, and organizations of consumers and digital media users such as support services and citizen initiatives. This chapter provides an overview of the currently available strategies and instruments for digital skills improvement, including the actors meant to use these instruments.