Preface

The constantly changing landscape of Digital Literacy makes it challenging for experts and practitioners to stay informed of the field’s most up-to-date research. That is why Information Science Reference is pleased to offer this three-volume reference collection that will empower students, researchers, and academicians with a strong understanding of critical issues within Digital Literacy by providing both broad and detailed perspectives on cutting-edge theories and developments. This reference is designed to act as a single reference source on conceptual, methodological, technical, and managerial issues, as well as provide insight into emerging trends and future opportunities within the discipline.

*Digital Literacy: Concepts, Methodologies, Tools and Applications* is organized into eight distinct sections that provide comprehensive coverage of important topics. The sections are: (1) Fundamental Concepts and Theories, (2) Development and Design Methodologies, (3) Tools and Technologies, (4) Utilization and Application, (5) Organizational and Social Implications, (6) Managerial Impact, (7) Critical Issues, and (8) Emerging Trends. The following paragraphs provide a summary of what to expect from this invaluable reference tool.

Section 1, *Fundamental Concepts and Theories*, serves as a foundation for this extensive reference tool by addressing crucial theories essential to the understanding of Digital Literacy. Introducing the book is “*A Snapshot Overview of the Digital Divide*” by Tanya Du Plessis, Chris Rensleigh, and Kelvin Joseph Bwalya, a great foundation laying the groundwork for the basic concepts and theories that will be discussed throughout the rest of the book. Another chapter of note in Section 1 is titled “*Millennials are Digital Natives?*” by Boaventura DaCosta, Carolyn Kinsell, and Angelique Nasah, which discusses the growth of a generation of those born in a digital age, who have known nothing but the wealth of communication technologies currently in use. Section 1 concludes, and leads into the following portion of the book with a nice segue chapter, “*The Global Digital Divide and its Impact on E-Governance,*” by Michael Howell-Moroney. Where Section 1 leaves off with fundamental concepts, Section 2 discusses architectures and frameworks in place for Digital Literacy.

Section 2, *Development and Design Methodologies*, presents in-depth coverage of the conceptual design and architecture of Digital Literacy, focusing on aspects including digital competence assessment, process modeling, sustainable development, empirics, game literacy, and many more topics. Opening the section is “*A Framework for Digital Competence Assessment*” by Antonio Cartelli. This section is vital for developers and practitioners who want to measure and track the progress of digital literacy on a local, national, or international level. Through case studies, this section lays excellent groundwork for later sections that will get into present and future applications for Digital Literacy, including, of note: “*Policy as a Bridge across the Global Digital Divide*” by Meena Chary and Stephen K. Aikins, and “*Exclusiveness vs. Inclusiveness in Software Development*” by Edeltraud Hanappi-Egger. The section concludes with an excellent work by Hazel Owen, titled “*Intelligent M-Learning Frameworks.*"
Section 3, **Tools and Technologies**, presents extensive coverage of the various tools and technologies used in the implementation of Digital Literacy. Section 3 begins where Section 2 left off, though this section describes more concrete tools at place in the modeling, planning, and applications of Digital Literacy. The first chapter, “Bringing the Internet to the Rural Area,” by Ainin Sulaiman, Zulkefli bin Ibrahim, and Tengku M. Faziharudean, lays a framework for the types of works that can be found in this section, a perfect resource for practitioners looking for new ways to benchmark progress and assess quality in rural and underserved or digitally illiterate areas. Section 3 is full of excellent chapters like this one, including such titles as “Children’s Maps in GIS,” “Integration of Educational Games in Synchronous Virtual Classroom,” and “Documenting Teachers and Students Experiences with Interactive Whiteboards in Ireland” to name a few. Where Section 3 described specific tools and technologies at the disposal of practitioners, Section 4 describes successes, failures, best practices, and different applications of the tools and frameworks discussed in previous sections.

Section 4, **Utilization and Application**, describes how the broad range of Digital Literacy efforts has been utilized and offers insight on and important lessons for their applications and impact. Section 4 includes the widest range of topics because it describes case studies, research, methodologies, frameworks, architectures, theory, analysis, and guides for implementation. Topics range from gaming, international digital divide, ICT and Healthcare, to ecology, sociology, and service delivery. The first chapter in the section is titled “The Dynamics of Video Gaming,” which was written by Sandra Schamroth Abrams. The breadth of topics covered in the chapter is also reflected in the diversity of its authors, from countries all over the globe, including USA, Greece, Turkey, Sweden, Australia, New Zealand, Nigeria, and more. Section 4 concludes with an excellent view of a case study in technology implementation and use, “A Case Study of Social Interaction on ANGEL and Student Authoring Skills” by Ruth Xiaoqing Guo.

Section 5, **Organizational and Social Implications**, includes chapters discussing the organizational and social impact of Digital Literacy. The section opens with “Citizens and E-Government Service Delivery” by Roland J. Cole, Isabel A. Cole, and Jennifer A. Kurtz. Where Section 4 focused on the broad, many applications of Digital Literacy technology, Section 5 focuses exclusively on how these technologies affect human lives, either through the way they interact with each other, or through how they affect behavioral/workplace situations. Other interesting chapters of note in Section 5 include “Collaborative Information Behavior in Completely Online Groups” by Sanda Erdelez and Sean Goggins, and “Gender Evaluation of Rural E-Governance in India” by Saxena Anupama. Section 5 concludes with a fascinating study of a new development in Digital Literacy, in “Internal Digital Divide in Organizations.”

Section 6, **Managerial Impact**, presents focused coverage of Digital Literacy as it relates to effective uses of technology diffusion, financing mechanisms, e-government, social inclusion, and many more utilities. This section serves as a vital resource for developers who want to utilize the latest research to bolster the capabilities and functionalities of their processes. The section begins with “Diffusion of Technology in Higher Education Classrooms,” a great look into how small colleges and universities can utilize benefits previously thought to be reserved to their larger competitors. The 10 chapters in this section offer unmistakable value to managers looking to implement new strategies that work at larger bureaucratic levels. The section concludes with “Addressing Social Inclusion via eDemocracy Applications” by Evika Karamagioli. Where Section 6 leaves off, section seven picks up with a focus on some of the more content-theoretical material of this compendium.

Section 7, **Critical Issues**, presents coverage of academic and research perspectives on Digital Literacy tools and applications. The section begins with “Social Equity, the Digital Divide and E-Governance,” by Meena Chary. Other issues covered in detail in Section 7 include social constructivism, identity,
psychological modeling, gender, and much more. The section concludes with “A Human Factors View of the Digital Divide” by Kayenda T. Johnson and Tonya L. Smith-Jackson, a great transitional chapter between Sections 7 and 8 because it examines an important question going into the future of the field. The last chapter manages to show a theoretical look into future and potential technologies, a topic covered in more detail in Section 8.

Section 8, Emerging Trends, highlights areas for future research within the field of Digital Literacy, opening with “What Does it Mean to Bridge the Divide?” by Liliane Dutra Brignol, Denise Cogo, and Suely Fragoso. Section 8 contains chapters that look at what might happen in the coming years that can extend the already staggering amount of applications for Digital Literacy. Other chapters of note include “From the Digital Divide to Multiple Divides” and “The Gloss and the Reality of Teaching Digital Natives.” The final chapter of the book looks at an emerging field within Digital Literacy, in the excellent contribution, “Toward a Roadmap to E-Government for a Better Governance” by Driss Kettani, Bernard Moulin, and Asmae El Mahdi.

Although the primary organization of the contents in this multi-volume work is based on its eight sections, offering a progression of coverage of the important concepts, methodologies, technologies, applications, social issues, and emerging trends, the reader can also identify specific contents by utilizing the extensive indexing system listed at the end of each volume. Furthermore to ensure that the scholar, researcher, and educator have access to the entire contents of this multi volume set as well as additional coverage that could not be included in the print version of this publication, the publisher will provide unlimited multi-user electronic access to the online aggregated database of this collection for the life of the edition, free of charge when a library purchases a print copy. This aggregated database provides far more contents than what can be included in the print version, in addition to continual updates. This unlimited access, coupled with the continuous updates to the database ensures that the most current research is accessible to knowledge seekers.

As a comprehensive collection of research on the latest findings related to using technology to providing various services, Digital Literacy: Concepts, Methodologies, Tools and Applications, provides researchers, administrators and all audiences with a complete understanding of the development of applications and concepts in Digital Literacy. Given the vast number of issues concerning usage, failure, success, policies, strategies, and applications of Digital Literacy in countries around the world, Digital Literacy: Concepts, Methodologies, Tools and Applications addresses the demand for a resource that encompasses the most pertinent research in technologies being employed to globally bolster the knowledge and applications of Digital Literacy.