

***Teaching Reading Comprehension in a Digital World:
Evidence-Based Contributions Using PIRLS and Digital Texts***
by Marian Bruggink, Nicole Swart, Annelies van der Lee and Eliane Segers

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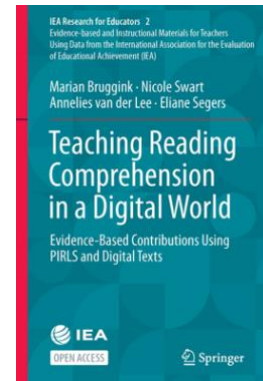
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Aim of the Book

As introduced in the preface, this book is the second volume in the series of The International Association for the Evaluation of Educational Achievement (IEA) Research for Educators. It employs data from the IEA *Progress in International Reading Literacy Study* (PIRLS) that measures the reading literacy of grade 4 students and influential factors on a global scale, with current research insights into reading comprehension. An ePIRLS text and question items are further utilized to demonstrate the comprehension processes involved in digital reading and provide instructional principles for practitioners.

The book aims to link theory to classroom practice through its central focus on research-based didactic principles for digital reading, to “prepare their students for the digital world” (Bruggink

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et al., 2025, p. viii). It is organized in four main chapters and accompanied by a glossary and the text materials from ePIRLS.

The Book

Chapter 1 discusses how paper and digital reading differ from each other, the inherent features of digital texts including screen size, scrolling, clicking, hyperlinks, multimodal channels, distractors, among others, and how they influence digital reading. It also explores the skills that are involved in digital reading, namely *navigating*, *integrating*, and *evaluating*, with associated subskills for each. The concept of digital inclusion, which “is about creating an inclusive environment with digital learning opportunities for all students to prepare them for a digital society” (Bruggink et al., 2025, p. 14), is discussed. The chapter suggests that digital inclusion could be enhanced through four interactive phases, namely *students’ attitudes*, *physical access*, *digital skills*, and *usage access*.

Chapter 2 shifts away from theorization to provide teachers with practical pedagogies that are ready for use in the classroom. It introduces the six didactic principles for digital reading instruction that are informed by research evidence. They include i) *building vocabulary*, *activating prior knowledge*, ii) *including the characteristics of digital texts in education*, iii) *modeling digital reading strategies*, iv) *supporting multiple document reading*, v) *stimulating self-regulation* and vi) *practicing regularly in the classroom across subjects*. Then practical tips on how to read, for example, hypertexts, namely hierarchical and networked hypertexts, are expressed in clear, manageable steps, in relation to the six instructional principles. Finally, three major practical recommendations for fostering digital inclusion are discussed: teaching students essential digital skills, providing them with sufficient time and opportunities to utilize these skills in meaningful and collaborative settings, and developing teachers’ digital competence. This chapter emphasizes the role of instruction in developing digital reading skills, by engaging students in the process of reading and comprehending and interpreting digital texts.

Chapter 3 builds on the theoretical foundations in the previous chapters and focuses on providing teachers with concrete examples where didactic principles are put to practice. Specifically, this chapter shows how the didactic principles for general reading comprehension are tailored to digital texts with illustrations drawn from 18 questions in an ePIRLS digital text called “Oceans”. Every single question item is systematically presented with three preliminary components: (i) the correct answer, accompanied by an analysis of the comprehension process, (ii) the skills and vocabulary, and (iii) prior knowledge required of students to successfully answer the question. Following this, practitioners are provided with the didactic suggestion based on one of the six research-informed didactic principles, with the exception of question 4, where the relevant didactic principle is not made explicit. The chapter ends with a general discussion to suggest applications of the four didactic principles that have not been directly discussed in relation to each individual question item. All in all, the ePIRLS text “Oceans” provides illustrative examples of how the four comprehension processes (i.e., focus on and retrieve explicitly stated information, make straightforward inferences, interpret and integrate ideas and information, evaluate and critique content and textual elements) and six pedagogical principles are translated into classroom-based digital reading tasks.

Chapter 4 elaborates on good practices to inspire digital reading education all over the world using success stories from three schools in PIRLS countries. Singapore, a country with relatively good reading achievement on ePIRLS, emphasizes the early introduction of various types of digital texts and instructional guidance on technical skills for students to navigate multimedia materials. Through a systematic approach, classroom teachers applied several didactic principles for digital reading introduced in Chapter 2. Italy, on the other hand, highlights the necessity of educating students about responsible use of technology. Media education is thus integrated into the school curriculum from grade 1, helping students develop critical awareness of multimedia and technology as well as essential digital skills. Ireland shares its experience of teaching primary students critical thinking when engaging with digital media and differentiating pedagogical approaches to suit learners' diverse needs. The narratives of the three exemplary schools illuminate the integration of diverse digital texts on a daily basis and their efforts in training primary school students in technical digital skills.

Reviewer Commentary

The book touches upon digital reading, a timely and contemporary topic relevant to today's world of digitalization in the educational landscape, and tackles it in a simple and practitioner-friendly package. It is well presented in four logically sequenced chapters, with appropriate textual spacing and visual additions (text boxes, figures, tables to present key terms, concepts, and models) to enhance navigation and understanding. It clearly describes the nature of digital reading and its distinctive factors that might impact on reading. The processes of reading, skills and strategies needed are practically demonstrated through specific types of digital text and specific reading comprehension items to showcase didactic principles for digital reading. Through this kind of modeling, together with examples of good practices in real-world settings, the book has effectively bridged theoretical insights and practical applications. With its open-access format, the book is readily accessible to all users.

Yet, from our perspective, some didactic suggestions accompanying each question item in Chapter 3 might be challenging to implement among young learners, such as activating their prior knowledge about different ocean habitats (Bruggink et al., 2025, p. 62) or evaluating the information they read on multiple "Oceans" webpages to start a debate about whether one person can make a difference in protecting the oceans (Bruggink et al., 2025, p. 83). Despite this, the book presents digital reading and its instruction through an interconnected, actionable, user-focused guide for teachers and teacher educators, one grounded in evidence-based principles to foster digital reading skills in young learners.

References

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About the Authors

Bao Trang Thi Nguyen obtained a PhD in language teaching and learning from Victoria University of Wellington, New Zealand. She teaches TESOL and Applied Linguistics at the University of Foreign Languages and International Studies, Hue University, Vietnam. She has published in different journals such as *Language Teaching Research, System, TESOL Journal, RELC Journal, Writing Assessment*, and *Electronic Journal of Foreign Language Teaching*. Email: ntbtrang@hueuni.edu.vn

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