



## Book Review

# *Powerful Literacy in the Montessori Classroom: Aligning Reading Research and Practice*

By Susan Zoll, Natasha Feinberg, and Laura Saylor

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Susan Feez, University of New England, Australia

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Maria Montessori argued that the classroom she established in 1907 for children under school age left unsupervised during the day in an impoverished area of Rome opened the way for “putting into practice those new principles of science” which were revolutionizing the “work of education” (Montessori, 1964, p. 1). She noted that to “prepare teachers in a method of the experimental sciences is not an easy matter,” while, at the same time, she warned her readers of the dangers of applying the experimental sciences to pedagogy in “a barren and mechanical way” (p. 7). For Montessori, a true scientific pedagogy was only possible if the classroom was organized as a social environment that enabled teachers to observe children’s activity generated by materials and lessons that capture their interest (see, for example, Montessori, 1964, p. 107). Lessons that captured the interest of the children in that first Montessori classroom included tracing Sandpaper Letters and pronouncing

the corresponding sounds, learning to hold and control a writing implement using Metal Insets, and composing familiar words using a Moveable Alphabet. Montessori (1964) famously described how these young children were soon using chalk to cover the walls and floor of the classroom with familiar words before subsequently rushing to read and act out commands written on little cards.

A century on, as young children in Montessori classrooms around the world continue to engage with Sandpaper Letters, Metal Insets, Moveable Alphabets, and Reading Command cards, an accumulation of studies into how children learn to read from across a range of disciplines has generated an influential body of research evidence that has been dubbed the science of reading. The science of reading is currently being used to shape education policy and mandated curriculum documents, especially in the English-speaking world. For this reason,

the comparative analysis of the Montessori approach and the science of reading presented in *Powerful Literacy in the Montessori Classroom: Aligning Reading Research and Practice* will be welcomed by many Montessori educators.

The book is organized into eleven chapters. The first two chapters provide overviews of Montessori education and the science of reading. Chapter 1 includes a brief synopsis of the provenance and history of Montessori education with a focus on its early adoption in the United States following the first international Montessori training course. The authors review key features of the pedagogy; these features include personalized instruction and a systematic, structured learning progression across all learning areas, as well as learning materials designed to isolate difficulty and control error. This section also helpfully describes the features of the prepared Montessori environment in terms of five classroom design elements found by Barrett et al. (2013) to improve student learning. This evaluation of the Montessori environment through the lens of a comparatively recent evidence-based conceptual framework foreshadows the use in subsequent chapters of the Reading Rope taxonomy to align the Language component of the Montessori curriculum with evidence emerging from science of reading research.

The overview of the science of reading in Chapter 2 begins by establishing what is meant by *science of reading* for the purposes of this book. This is an important step because, as the authors note, the term science of reading is interpreted in varying ways in the multiple contexts in which it is used, including inaccurately in many popular contexts when the term is conflated with phonics only. This chapter also provides an example of science of reading translated into practice, an acknowledgement that science “is one kind of thing (empirical findings and explanatory theories)” while “educational practice is another (activities that promote learning in real world settings)” (Seidenberg et al., 2020, p. S121).

Chapter 2 includes a section that reviews three seminal reports presented as the “foundations of reading research” (p. 34) followed by an explanation of the Simple View of Reading (Gough & Tunmer, 1986; Hoover & Tunmer, 2021) and its elaboration in the well-known Reading Rope framework (Scarborough, 2001). The Reading Rope framework expands into their constituent skills the two main components of skilled reading identified in the Simple View of Reading: Word Recognition and Language Comprehension. This framework is used very effectively to organize the subsequent chapters of the book.

Chapter 2 concludes by drawing attention to the overlapping principles that underpin both Montessori pedagogy and instructional practices based on the science of reading. This overlap embraces multisensory, systematic, explicit, and interactive teaching approaches alongside opportunities for the extended practice and repetition that lead to word recognition automaticity and comprehension—the ultimate goal of reading instruction.

The overview chapters are followed by two separate parts of the book organized, as noted above, according to the strands of the Reading Rope framework. Including a short introduction and conclusion, “Part I: Word Recognition” comprises three chapters: “Phonological Awareness” (Chapter 3), “Decoding” (Chapter 4), and “Sight Recognition” (Chapter 5). Similarly, “Part II: Language Comprehension” has a short introduction and conclusion, and five chapters: “Background Knowledge” (Chapter 6), “Vocabulary” (Chapter 7), “Language Structures” (Chapter 8), “Verbal Reasoning” (Chapter 9), and “Literacy Knowledge” (Chapter 10). Each of the chapters in Parts I and II are structured in the same way: an introduction followed by a summary of the featured reading skill and how to teach it from the science of reading point of view, a selection of materials and lessons used in Montessori early years classrooms to address the skill, and, finally, exemplar activities for teaching this skill drawn from the structured literacy approach.

The three chapters of Part I, mapped against the word recognition strands of the Reading Rope Framework, cover knowledge and skills that, ideally, are taught systematically, are learned relatively quickly, and are assessed comparatively easily during initial instruction in the early years of school (Paris, 2005). In each chapter, the science of reading principles underpinning each of these strands are reviewed in summaries that will become useful resources for teacher education programs or teachers wishing to refresh their knowledge. The authors ensure key terms are clearly defined while distinguishing between commonly confused terms, for example, *phonological awareness*, *phonemic awareness*, *phoneme*, and *phonics*. They also draw attention to the fact that while phonological awareness is the foundation on which sound-letter knowledge (decoding) is built, which in turn supports sight recognition, as these skills develop, they reinforce each other, indicating that integrated instruction in all three is the most effective approach.

As the authors point out, the Montessori lessons and materials that support the word recognition strands of reading development are largely located in the Language area of the classroom and include iconic

Montessori materials such as the Sandpaper Letters and Moveable Alphabet. The authors should be commended for highlighting both sound discrimination in general as a skill that makes phonological awareness possible and the Montessori Sensorial materials, through which children develop and refine this skill, including the Sound Cylinders and the Bells. In the decoding chapter (Chapter 4), the authors highlight Montessori materials, specifically the Geometric Cabinet, Geometric Solids and Metal Insets, that build visual discrimination and fine motor skills to support the ability to distinguish between and form the letters of the alphabet. They also describe in detail how, in Montessori settings for young children, the alphabetic principle—the relation between sounds and letters—is introduced during three period lessons with the Sandpaper Letters. From this point, encoding—making words using the Moveable Alphabet—precedes and prepares for later decoding.

Chapter 5 provides an overview of the evolving use of the term *sight words*, originally used for words that are not easily sounded out but which, from the science of reading perspective, is applied to all words that a reader can recognize automatically on sight, including high frequency words. The chapter provides a review of the approach for teaching writing and reading in English-speaking Montessori classrooms developed by Muriel Dwyer (1977) to address the fact that sound-letter correspondence is far less consistent in English orthography than in Italian, the language used in Montessori's first classrooms. The authors argue convincingly that in light of science of reading evidence, Montessori teachers in English-speaking classrooms may need to review some elements of this approach, including the notion of puzzle words. The original list of puzzle words in Dwyer (1977, p. 14) includes words not easily sounded out such as *I, the, put, was, one, are*. Interestingly, the examples used in Chapter 5 (*that, them, this*) can be sounded out quite easily and are better described as high frequency words, thus illustrating the shift in our understanding of sight words over recent decades, and perhaps underscoring the need for Montessori educators to clarify the current use of the term *puzzle words*.

“Part II: Language Comprehension Overview” draws attention to language skills underpinning skilled reading, skills that develop from infancy across the lifespan (Paris, 2005). As well as summarizing the five strands of language comprehension from a science of reading perspective, these chapters reveal how the knowledge-rich Montessori curriculum supports the development

of every dimension of reading comprehension. Relevant materials described in Part II include the three-part classification cards and definition booklets that feature in every Montessori learning area as the culmination of series of lessons that have their origin in concrete experience (Table 6.1), alongside charts such as the “Fundamental Needs of Humans” and the “Timeline of Life.” Chapter 7, “Vocabulary,” highlights morphology (word study) in Montessori classrooms, important because English orthography is *morphophonemic*, the alphabetic code not only being used to represent sounds (phonemes), but also meaningful parts of words (morphemes). Unfortunately, there is no mention in this chapter of the study of etymology, which is such a distinguishing feature of Montessori elementary classrooms.

Chapter 8, “Language Structures,” highlights another distinctive feature of the Montessori curriculum: the series of Functions of Words and Grammar Box activities through which young children build both reading fluency and knowledge about grammar using manipulable materials. The authors could have expanded upon the role of the Montessori grammar materials as a bridge that leads children from decoding words to comprehending the meanings of connected text. They also could have pointed out the ways interaction with the Montessori grammar materials support children's development of “Verbal Reasoning” (Chapter 9).

By comparing the Montessori reading curriculum with instructional practices aligned with the science of reading, the authors of *Powerful Literacy in the Montessori classroom* have achieved their goal of helping Montessori educators “see the familiar in a new way” (p. 12). Realizing the full potential of this project, however, is beyond the scope of one publication. The matrix on Montessori Materials and science of reading in the appendix demonstrates that there are many more Montessori materials and activities to consider in terms of their alignment with the science of reading. Readers looking forward to using this matrix should be aware that, unfortunately, the e-book version of this handy resource is not easy to follow.

The wider Montessori community would benefit if this book prompted further investigations into how or where Montessori pedagogy aligns with evidence-based teaching practice. This suggestion is made with several caveats. First, for every strand of the Reading Rope, in addition to selected Montessori activities aligned with that strand, the authors have provided exemplar

teaching activities from conventional classrooms that “might be considered for adaptation in Montessori classrooms to further support learning” (p. 49). Careful consideration needs to be given to how these exemplars might be adapted for Montessori classrooms given the study results reported in Lillard (2012) and Lillard and Heise (2016). This evidence suggests that high-fidelity Montessori programs result in significantly better student outcomes than Montessori programs supplemented with conventional materials and activities.

As an example, the question can be raised whether it is necessary to supplement Montessori reading materials with commercial decodable readers of the type listed by the authors in Chapter 4. The Montessori curriculum already provides many opportunities for teachers to provide individual children with tailor-made decodable text. For the Object Boxes and Word Reading activities, Reading Commands, Functions of Words, Reading Analysis, and Grammar Boxes, rather than relying on generic, commercially available cards and labels, teachers can write their own, customizing the text to provide practice with decoding the specific letters and sounds individual children have already learned while also making meanings that reflect their current interests and experience. Montessori teachers in earlier times prepared cards and labels by cutting out and writing them by hand. With the advent of computer technology, it is now much less time consuming to ensure children will always find something new, personalized, interesting, perhaps even humorous, and decodable to read in the baskets and boxes that house the Language materials on the classroom shelves. In addition, Montessori teachers have traditionally made Little Books (Dwyer, 1977), created especially for those in the class just starting to read. These Little Books, sometimes called First Books, are in effect decodable readers, even though they have been used in Montessori classrooms from long before the term *decodable* gained currency.

Aligning science of reading evidence to Montessori practice should also account for the global reach of Montessori education. Many children in Montessori schools around the world are learning to write and read in non-European, non-alphabetic orthographies. For this reason, Montessori educators need to be aware that the science of reading research agenda, based as it is on the alphabetic principle, has been described as potentially insular and Anglocentric (Share, 2021).

Finally, looking past the science of reading foundation documents reviewed in Chapter 2, it is worth noting that the science of reading research agenda is

“a moving target” (Seidenberg et al., 2020, p. S121). Science of reading evidence, as is inevitable in the research space, continues to be reviewed, debated, and contested (for example, Castles et al., 2018; Shanahan, 2020; Thomas, 2022; Wyse & Bradbury, 2022). In contrast, Montessori pedagogy remains a still point in the evolving history of educational practice, a history characterized by competing research agendas. *Powerful Literacy in the Montessori Classroom* successfully aligns the science of reading evidence with Montessori practice and provides compelling evidence of Montessori efficacy in the Preface (e.g., Culclasure et al., 2018; Lillard et al., 2017). Combining these factors with the resilience of the pedagogy over more than a century suggests that Montessori education—when implemented with fidelity—can provide mainstream education with models of effective practice worth emulating. For this reason, Montessori educators should not feel they must always measure themselves against current trends, but instead might look for opportunities to demonstrate to those in the wider education community the effectiveness of Montessori practice, which has defied obsolescence for so long.

## Author Information

Susan Feez is an adjunct associate professor on the Faculty of Humanities, Arts, Social Sciences and Education at University of New England, New South Wales, Australia. She can be reached at [sfeez@une.edu.au](mailto:sfeez@une.edu.au). <https://orcid.org/0000-0003-0977-2640>

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