



Preface

Jean F. Andrews and Qiuying Wang

Promoting deaf students' literacy skills is a highly valued educational objective worldwide. In a survey conducted by the World Federation of the Deaf, 93 countries reported "the quality of education for deaf people is low and the illiteracy rate is high" (Haualand & Allen, 2009, p. 6). However, literacy is not an unattainable goal for deaf students if the optimal conditions are met, as demonstrated by studies on highly literate deaf adults (Mounty, Pucci, & Harmon, 2005).

A review of literacy research with deaf students over the past forty years has indicated that the lion's share of research has been conducted in English-speaking countries (Luckner, Sebal, Cooney, Young III, & Muir, 2005). However, of the estimated 34 million deaf children in the world (World Health Organization, 2018), about 90% reside outside of the United States. Share (2014) voiced the mounting concern in the literacy field that ". . . much of reading research has been confined to a narrow Anglocentric research agenda addressing theoretical and applied issues with only limited relevance for a universal science of reading and literacy." Similar reservations have been noticed in the fields of deaf education (Knoors, Brons, & Marschark, 2019). Literacy research and instruction, in particular, have been overwhelmingly dominated by work in English. International deaf students are learning various sign languages, spoken languages, and different scripts. Improving literacy outcomes for these deaf students requires substantial additional research. Excitingly, there is an increasing number of international literacy projects in deaf education, though many in the field are unaware of these initiatives. The purpose of this edited volume is not only to discuss literacy projects conducted in the United States, but also to widen our lenses by incorporating international projects to increase global understandings of literacy education in deaf students from birth to high school. We asked contributors to report on their projects and to give us a window into their own perspective on literacy and deaf students.

ORGANIZATION OF THE BOOK

The book is organized by country/regions and writing systems embedded within either Western or Eastern cultures. The writing systems feature alphabetic scripts in three regions: *South and Central America* (Part I), *North America* (Part II), and *Europe, Africa, and the Middle East* (Part III); and nonalphabetic scripts in two regions: *China* (Part IV) and *East Asia* (Part V). By and large, cultures in the West tend to be more individualistic, whereas people from the East are more collectivist. These concepts are a running thread through many Eastern and Western cultural

differences. Culture may shape our expectations of learning: what students can and should know and do at various ages. These beliefs influence literacy teaching practices and curriculum choices, which affect students' skills, motivation, and excitement about language and literacy learning (Parlakian & Sanchez, 2006). In the case of deaf students, another running thread goes through literacy practices, as they may add a sign language and other visual ways of being and experiencing the world differently from their hearing peers (Holcomb, 2013).

AUDIENCE

Many of our chapters were written by teachers and researchers for whom English is not their native language. Taking into account the challenging writing task for them, the authors' unique "voice" or style was retained, so they could express their views about literacy instruction for deaf learners. We hope that this edited volume will provide a valuable resource for professionals who work with deaf students, such as university instructors and researchers, graduate students, early childhood educators and schoolteachers, clinical psychologists, school counselors, sign language interpreters, social workers, speech and language pathologists, audiologists, and administrators. Parents and families may find the links between sign language and literacy from other cultures to be helpful when making communication mode choices for their deaf family members. Legal officials working with deaf immigrants caught up in the criminal justice system may find the language and literacy issues covered in this book informative in their forensic practice. With the international movement toward inclusion, many deaf students across the globe are taught by general educators (World Federation of the Deaf, 2018), so this book may also be useful for them. Global reading networks with literacy projects supported by USAID and the World Federation of the Deaf (WFD) may find this book to be a handy resource.

TERMINOLOGY

This volume utilizes the term *deaf* in an all-inclusive manner ". . . with the goal of recognizing experiences that are shared by all members of our diverse communities while also honoring all of our differences" (National Deaf Center on Postsecondary Outcomes, 2018). We use the capital Deaf to indicate Deaf culture or Deaf community, as suggested by deaf scholars (Kusters, De Meulder, & O'Brien, 2019).

How we understand and use the word *literacy* has implications for deaf students and their understanding of literacy practices. We recognize that along with print-based traditional literacies are technology-mediated and interactive literacies, which some authors call multiple or the new literacies arising from new technologies, including things like text messaging, blogging, social networking, podcasting, and video making. For deaf readers, literacy can also include the "viewing" of sign language videos that are presented in bilingual e-texts. English literacy development has been influenced by the Deaf perspective. This viewpoint involves the use of the special literacy practices of Native Deaf adults. Using these

unique strategies, deaf students can use a sign language of the Deaf community to learn the written (and sometimes spoken) language of their majority culture (Holcomb, 2013).

Another term, the *deaf bilingual learner*, refers to students who use sign language to communicate, support their learning of written language, and function academically and socially (Piñar, Dussias, & Morford, 2011).

OVERVIEW OF THE BOOK

Exactly, what content do we feature in this book? In Parts I, II, and III, we have 11 chapters that focus on the use of Roman and Arabic alphabetic scripts in three geographic regions: (a) South and Central America, (b) North America, and (c) Europe, Africa, and the Middle East. Parts IV and V consist of eight chapters that focus on the use of nonalphabetic scripts in mainland China and East Asia, including Taiwan, Hong Kong, Japan, and South Korea.

Chapter 1 describes an innovative reading comprehension intervention program—TECLAS (a reading strategies workshop for deaf students) in Chile. This program was designed for high school students to teach metacognitive strategies using expository texts. Over an 8-week time frame, the teachers used games and the deaf students' dominant language, Chilean Sign Language (LSCh), to teach them to read in Spanish. Positive outcomes were reported compared to a control group. Moving north up the South American coast to Colombia, in Chapter 2, the history of communication methods is traced from oral policies in the early 1920s to current bilingual policies using *Lengua de Señas Colombiana* (LSC) and Spanish. Innovative bilingual projects in early childhood (birth to 5 years) and elementary school (1st to 5th grade) are described. The challenges, such as poverty, school attendance, lack of governmental research support, and lack of teacher professional development, are acknowledged as impacting student literacy achievement.

Proceeding east to the largest country in South America, Brazil, Chapter 3 provides an overview of language and literacy teaching for deaf students using *Lingua Brasileira de Sinais* (Libras) and Portuguese. With the Brazilian government's support of inclusion, its acceptance of Libras, and preliminary positive outcomes of bilingual interventions, the researchers recommend the (re)thinking of the organization of the deaf education curriculum.

Heading north across the Caribbean Sea to Central America and the country of Mexico, Chapter 4's authors challenge the traditional definition of literacy. The authors enlarge its definition to accurately reflect the experiences of deaf individuals who use Mexican Sign Language (LSM) and written Spanish to navigate culturally and linguistically diverse spaces. The authors suggest that the literacy framework be broadened to encompass notions of understanding and communication, and include those individuals who make such communication possible.

Two chapters cover the United States. Chapter 5 investigates the relationship between Rapid Automatized Naming (RAN) and reading in a sample of deaf adolescents who use American Sign Language (ASL). Significant correlations were

found between RAN colors and word decoding; RAN colors and reading comprehension; and reading fluency and RAN colors, numbers, and letters. The findings of this study have implications for vocabulary and comprehension research, assessment, and identification of reading difficulties.

Also covering the United States, Chapter 6 presents a theoretical argument to support why language accessibility is a key factor in facilitating American deaf children's literacy development with cognitive and socioemotional benefits. Also discussed is the role of media and technology as a means to provide access to sign language. In keeping with the overall theme of this edited volume, the authors recommend the better utilization of local and international resources around the world to increase access to visual language and research-based teaching practices.

Moving farther into North America to Canada, Chapter 7 examines a series of three studies that investigated the validity of the Comprehension of Written Grammar Test (CWGT) for deaf students. Overall results indicated that deaf multilingual learners and/or deaf learners with disabilities had difficulty comprehending six grammatical structures. Recommendations are provided for interventions that target these grammatical English structures to improve reading comprehension with diverse populations of deaf and hard of hearing learners.

Moving across the Atlantic to Europe, Africa, and the Middle East, this next section provides descriptions of models and literacy practices in Sweden, Kenya, Saudi Arabia, and Greece. In Chapter 8, researchers from Sweden propose a cognitive model of reading development for deaf learners called the Developmental Ease of Language Understanding (D-ELU) model. The D-ELU model considers both spoken and signed language as complementary, where the reader reconstructs the intended meaning of the text, based on successful identification of forms (i.e., words and sentences) that can be assigned meaning when adequate prior knowledge has been established. Heading down to the south of Europe to Greece, researchers in Chapter 9 present the recent developments of the deaf educational system in Greece in relation to curricula and teaching approaches to literacy learning. Overviews are provided of studies that examined the development of literacy skills and the achievement of deaf students in reading and writing Greek. Issues and shortcomings related to existing research as well as techniques to effectively assess and teach deaf students are analyzed. Areas for future research, including crosslinguistic studies on literacy learning, are recommended.

Leaving southern Europe and heading to the eastern African country of Kenya, in Chapter 10, the researcher documents the critical issues in language and literacy planning in deaf education. Within this multilingual society, with 68 spoken languages and Kenyan Sign Language (KSL), decisions on language usage in schools have had a significant impact on the teaching of literacy. A discussion of research-based practices is presented to improve literacy among Kenyan deaf students who are considered bimodal and multilingual.

Heading north across the Red Sea and into the Middle Eastern country of Saudi Arabia, researchers in Chapter 11 report on the contextual issues and considerations in the teaching of language and literacy to deaf students from the

practitioner perspective. Challenges in teaching deaf students who use a variety of modes, such as spoken Arabic, Saudi Sign Language, and the standard Arabic written script are described. Based on a national teacher survey and existing literature, the researchers suggest future directions for policymaking, teacher training, and professional development in literacy education for deaf Saudi students.

In Parts IV and V, literacy practices from countries that utilize nonalphabetic scripts are featured. The first three chapters focus on the Chinese language.

Chapter 12 focuses on the development of Chinese (Mandarin) literacy skills for deaf individuals with limited or no adequate access to spoken Chinese. The authors discuss the possible roles that instructional tools, such as the Chinese Manual Alphabet and the Chinese Finger Syllabary, could play in the acquisition of Chinese literacy skills. Further research on these tools in addition to incorporating findings from research on typical Chinese literacy learners are recommended. In Chapter 13, the researcher uses the qualitative approach as an inquiry into childhood literacy practices experienced by eight native Chinese deaf adults living in the United States. Using a grounded theory-based approach, individual profiles are created and crossanalyzed, extracting three prevalent themes: deafness as disability, deafness as challenge turned into opportunity, and leveraging visual strategies for learning and reading acquisition. Implications for language and literacy development within a bilingual context are addressed for young Chinese deaf students. Chapter 14 introduces two experiments using eye-tracking technology to reveal lexical activation during parafoveal processing of words among Chinese deaf readers. Results from both experiments jointly suggested that readers' lexical processing can be flexibly adjusted across individuals using information available in their linguistic environment.

Leaving mainland China, heading east across the South China and Yellow Seas, the final five chapters cover literacy practices in Taiwan, Hong Kong, Japan, and South Korea. These countries allow us to examine a variety of scripts, such as the classical Chinese script (in Taiwan and Hong Kong), the Korean Hangul script, and the three different Japanese scripts.

Chapter 15 consists of two intervention studies conducted in Taiwan that involved Deaf teachers who were fluent in Taiwanese Sign Language (TSL) and written Chinese. One study focused on how kindergarteners utilized TSL, drawings, and photographs to develop Chinese writing skills. The second study examined the word recognition skills of 4th-grade deaf students who were exposed to an intervention that included TSL handshape stories. Recommendations are provided for early childhood educators, teachers, and parents to increase Chinese literacy learning using visual tools. Chapter 16 describes the demographic variables that impact the literacy learning of deaf Taiwanese students, reviews deaf students' reading achievement in comparison with hearing peers using standardized tests, and reports on reading intervention studies and classroom action research projects. Future research directions are recommended.

Crossing the Formosa Strait into Hong Kong, Chapter 17 compares the receptive and expressive vocabulary knowledge of Hong Kong Chinese deaf children with their hearing peers. Data were drawn from children enrolled in the K3 to P3

Sign Bilingualism and Co-Enrollment Program (SLCO) in Hong Kong, as well as hearing students from regular mainstream schools. Both deaf and hearing children showed a significant improvement in vocabulary acquisition. Deaf children exhibited a slightly slower rate of expressive vocabulary growth when compared with hearing peers, and their productive vocabulary was found to be highly correlated with their reading scores.

Heading north to the islands of Japan, Chapter 18 examines literacy development in deaf education from three areas: (a) history from 1840s to the present, (b) the current situation and challenges, and (c) future perspectives. Future paths utilizing bilingual and bimodal language-learning approaches are suggested.

Heading west from Japan across the Korea Strait, Chapter 19 provides perspectives on current deaf education in South Korea. With approximately 63 percent of deaf students in South Korea using a cochlear implant (CI), and 76 percent of deaf students being mainstreamed or taught in inclusive classrooms, schools for the deaf continue to have declining numbers of deaf students. In addition to auditory oral-focused practices in deaf education, policies, and curriculum, bilingual approaches using KSL and written Korean have recently been developed and are expected to positively impact the educational practices in schools.

REFERENCES

- Haualand, H., & Allen, C. (2009). *Deaf people and human rights*. Helsinki, Finland: World Federation of the Deaf and the Swedish National Association of the Deaf. Retrieved from <https://www.rasit.org/files/Deaf-People-and-Human-Rights-Report.pdf>
- Holcomb, T. (2013). *Introduction to American deaf culture*. New York, NY: Oxford University Press.
- Knors, H., Brons, M., & Marschark, M. (2019). *Deaf education beyond the Western world*. New York, NY: Oxford University Press.
- Kusters, A., De Meulder, M., & O'Brien, D. (2019). Innovations in Deaf studies: Critically mapping the field. In A. Kusters, M. De Meulder, & D. O'Brien (Eds.), *Innovations in Deaf studies: The role of deaf scholars*. New York: Oxford University Press.
- Luckner, J. L., Sebald, A. M., Cooney, J., Young III, J., & Muir, S. G. (2005). An examination of the evidence-based literacy research in deaf education. *American Annals of the Deaf*, 150(5), 443–456.
- Mountry, J. L., Pucci, C. T., & Harmon, K. C. (2013). How deaf American sign language/English bilingual children become proficient readers: An emic perspective. *Journal of Deaf Studies and Deaf Education*, 19(3), 333–346.
- National Deaf Center on Postsecondary Outcomes. (2018). *About us*. Retrieved from <https://www.nationaldeafcenter.org/about-us>
- Parlakian, R., & Sanchez, S. Y. (September 2006). Cultural influences on early language and literacy teaching practices. *Zero to three*. Retrieved from http://pottsfamilyfoundation.org/wp-content/uploads/2010/09/ZTT27-1_Parlakian1.pdf
- Piñar, P., Dussias, P. E., & Morford, J. P. (2011). Deaf readers as bilinguals: An examination of deaf readers' print comprehension in light of current advances in bilingualism and second language processing. *Language and Linguistics Compass*, 5(10), 691–704.

- Share, D. (2014). Alphetism in reading science. *Frontiers in Psychology*, 5, 752. doi: 10.3389/fpsyg.2014.00752
- World Health Organization. (2018). *Deafness and hearing loss*. Geneva, Switzerland: WHO. Retrieved from <http://www.who.int/news-room/fact-sheets/detail/deafness-and-hearing-loss>
- World Federation of the Deaf. (2018). *WFD Position Paper: Deaf community as linguistic identity or disability*. Helsinki, Finland: WFD. Retrieved from <https://wfdeaf.org/wp-content/uploads/2018/07/LM-and-D-Discussion-Paper-FINAL-11-May-2018.pdf>

HOW TO ACCESS THE VIDEO SUMMARIES

Video summaries of some of the chapters are available online at the Gallaudet University Press YouTube channel:

www.youtube.com/GallaudetUniversityPress.

Under Playlists, click “Literacy and Deaf Education.”

Ebook readers can click this link for instant access:

<https://bit.ly/2C9pRm0>

The beginning of each chapter that has a summary also contains a QR code that links to the corresponding summary in ASL or in the chapter author’s native sign language.

For a summary of the entire book, please go to <https://bit.ly/2ZGtIyR>.

Acknowledgments

As editors of this volume, we greatly appreciate the support and help of our contributors, colleagues, students, publisher, and our lifelong mentors.

We would like to especially highlight the contributions of Katie Lee and Ivey P. Wallace of the Gallaudet University Press as outstanding editors, colleagues, and friends. Of special note, Ivey P. Wallace retired in 2018, but her work with us helped shape the content and format of this volume. We would like to thank the reviewers whose constructive criticism and comments significantly improved the quality of this work. We also thank the two editors, Deirdre Mullervy and Doug Roemer, who assisted in the final editing, and Angela Leppig, director of the marketing division of Gallaudet University Press. We are grateful for the multilingual expertise of Bev Buchanan who provided assistance with the sign language summaries of the chapters.

We gratefully recognize the invigorating and innovative work of our contributors who wrote the chapter(s) of their respective country, linking the theories to their real-life classroom success and challenges to enrich and deepen the understanding of language, literacy development, and learning in deaf communities from global perspectives.

I, Qiuying Wang, thank my family and friends for their encouragement, support, and understanding of my work. Special thanks to Dr. Richard C. Anderson, my lifelong mentor and world-renowned scholar in educational psychology, whose legacy continues to impact my career. Thank you to my student assistants, and most of all, Ajay Biodun, Diana Ewell, Emily Flippin, and Shonda Goss for tirelessly checking the references and APA-style formatting. I am grateful to be a professor at Oklahoma State University (OSU), where I have grown professionally as a scholar. I am so very fortunate to be part of the literacy program at OSU with outstanding colleagues that encouraged me with my unique research interest. Most of all, I thank Jean F. Andrews who guided and mentored me about deaf culture, deaf education, sign language, and literacy areas. It is a privilege to collaborate with her on this volume.

I, Jean F. Andrews, thank my family, colleagues, and friends for their support during this book editing process. A special thanks to Dr. Jana M. Mason who got me started in reading research in 1979 and whose work in emergent literacy and creative children's story writing continues to be an inspiration and guide. I acknowledge Dr. Sharon Baker and Dr. Laurene Simms, two colleagues who, as reading educators, have influenced my thinking of literacy with Deaf students. I also thank the many Deaf and hearing students and colleagues with whom I joined in the classroom during my school and university teaching career. I gratefully acknowledge the Lamar faculty and staff of the Department of Deaf Studies and Deaf Education, particularly, chairperson Dr. M. Diane Clark. They have provided

me with resources, such as opportunities to serve on dissertations, and have given me access to books, articles, and conversations about Deaf students and reading. I thank Qiuying Wang, who graciously introduced me to literacy learning of Chinese students, which has extended my knowledge of a different writing system and has led to many hours of conversations, some of which lead to joint projects with Chinese students who are deaf.