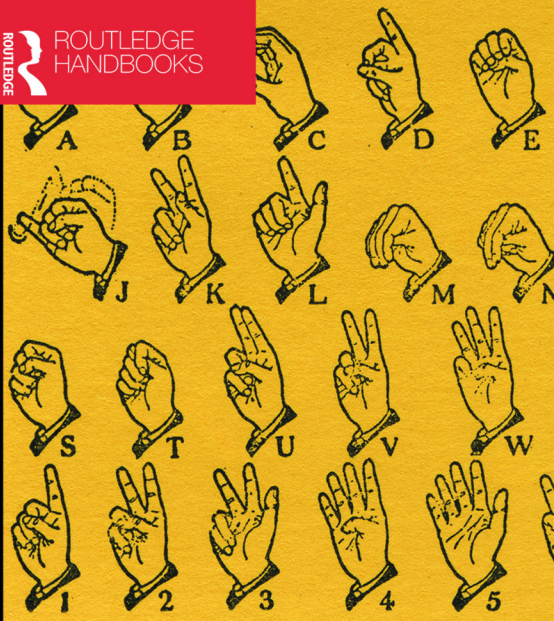


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# The Routledge Handbook of Sign Language Pedagogy

Edited by Russell S. Rosen

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# The Routledge Handbook of Sign Language Pedagogy

*Edited by Russell S. Rosen*

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*This book is dedicated to my late wife*  
*Violet Bieber Stein-Rosen*



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# Introduction

## Pedagogy in sign language as first, second, and additional language

*Russell S. Rosen*

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The *Handbook of Sign Language Pedagogy* covers pedagogy and sign language as first (L1), second (L2) and additional ( $L_n$ ) language. Sign language pedagogy encompasses the instruction, curriculum, and assessment that involve the use of sign languages. It is developed by teachers to use, teach, and assess, and for the learners to learn and be evaluated in using sign language to communicate about scholastic and life-related matters. Very little research has examined the L1 and L2/ $L_n$  pedagogy of sign languages. Historically and in common with minority languages, pedagogical practices and materials in sign languages in most of the world were based on practical experiences, informal mentoring, and the influence of available materials, rather than from a body of research and formal training in language pedagogy practices. The studies that focus on pedagogy practices with sign languages are emerging. This leaves many of us wanting an ephemeral “record” of that body of knowledge.

The motivation for this volume is created by recent research studies on sign language and pedagogy, and a paucity of spaces where all studies are packaged together. This *Handbook* seeks to provide a comprehensive overview of the field of L1 and L2/ $L_n$  sign language pedagogy, and a useful resource for teachers, educator practitioners, learners, policymakers, and researchers. The contributions represent international perspectives and best practices, and can serve as a springboard for further works in pedagogy.

### A history of sign language research and practice

This volume follows five decades of sign language linguistic research and practice. As Veditz, formerly President of the National Association of the Deaf in the US at the turn of the twentieth century, remarked, if there are deaf people, there will be sign language. As anthropologists and sociologists have discovered, there are sign languages in every corner of the world, from small geographically isolated villages to metropolises. Sign languages are used by not only deaf people, but also hearing people to communicate with each other. In order for them to be able to use sign languages to communicate, they would need to first learn it. Some people, primarily deaf children and hearing children of deaf adults, learn sign languages as their first languages. Other people, most of whom are hearing and deaf people who learned spoken or different sign languages first, learned sign languages as their second or additional languages. They learned sign

languages from different constituencies such as teachers, families, and friends. Sign languages are taught and learned under various settings such as homes; schools, colleges, and universities; social service agencies; religious organizations; and community centers.

That people are teaching and learning sign languages drew the attention from researchers and practitioners worldwide. Sign language research was initiated in the 1960s in the US, with studies on sign language linguistic structures and its acquisition by children who are native users of sign languages. Since the 1960s, there is a growth in research studies in the psycholinguistics and sociolinguistics of sign languages. At that time, however, most of the schools and programs for deaf children have favored the oral-aural approach, that is, the use of speech and hearing to learn scholastic subjects. Studies have demonstrated the unequal success of the approach, and many schools turned to the manualist approach, that is, the use of sign language as the language of instruction at the schools for the deaf.

The studies that legitimize sign language have empowered individuals in the Deaf communities worldwide for increased societal acceptance of their language, community, and culture. Because of the research findings, coupled with the increased mobilization of Deaf communities worldwide, there is an increase in the number of nations that recognize sign language as bona fide spoken languages. This recognition is accompanied by the requirement that the learners take it for academic credit in educational institutions, and for schools to use it with signing deaf learners.

It was not until the 1980s that there was a growth in the enrollment of classes in sign languages as L2/*L<sub>n</sub>* for academic credit in educational institutions. They are primarily taken by individuals who speak and hear, and whose L1 tends to be spoken and written languages. The studies that were published since then looked at the psychological and psycholinguistic processing of sign languages and sign language acquisition by hearing learners who learn sign languages as their L2/*L<sub>n</sub>*. Since the late 1980s to the early 2000s, there was a proliferation of sign language education programs in education institutions, and sign language teachers and interpreters in colleges and universities, and elementary- and secondary-level regular and special education classrooms. This was followed by an increase in the number of higher education programs that prepare individuals to become sign language teachers, and teachers and interpreters for the deaf and hard of hearing. The studies on sign language pedagogy, that is the use of sign language in instruction, curriculum, and assessment, followed.

## **Recent developments in sign language pedagogy**

Different constituencies are involved in the development and execution of sign language pedagogy. The constituencies of sign language pedagogy are teachers, educator practitioners, curricular and instructional developers, sign language interpreters, policymakers, researchers, and parents. Each has different areas of knowledge and skills regarding pedagogy and use of sign languages. Teachers need to know about teaching, instructional materials, and evaluation of their learners. Educator practitioners include psychologists, social workers, interpreters, and evaluators, and they need to know how to use sign language to communicate and work with their deaf clientele base. Curriculum and assessment developers create sign language curricula, instructional materials, assessment test materials, procedures, and scoring systems, and they need to know about sign language linguistics, learning, acquisition, use, and assessment forms, procedures, and scoring rubrics. Interpreters need to know sign language linguistics and translation processes, and sign language systems used in the Deaf community and their clientele. Policymakers need to know sign language policy and practice in sign languages that shape its dissemination and use, and the standards that will ensure quality in teaching, learning, and evaluation in sign language pedagogy.



Researchers need to know the conditions that enable nations to recognize sign languages and offer it as a language for its inhabitants to learn and use; the factors that shape teaching and learning processes; and the effectiveness of curriculum and assessment designs.

Learners of sign languages may learn it as a L1, L2, or  $L_n$ , may it be third language, fourth language, or so on. The designation of the learners of sign languages into modality groups is based on the modality of the languages they know prior to learning sign languages. The learners who learn a sign language as another sign language are seen as One Modality and Language Second, or M1/L2. If a learner learns L1 in the oral and aural modality, and learns a second language in the visual-gestural modality, it is M2/L2. Learning a language of the same modality and a language of different modality entails different teaching and learning processes.

In addition, there are two cases of sign language pedagogy. In the first case, sign languages are used to teach, learn, and assess in academic subject matters, including sign language linguistics and literature. In the second case, sign languages are used to teach, learn, and assess in sign languages. Both approaches are used with native child users of sign languages and hearing learners, and with deaf learners who are either late deafened or were raised in spoken and written languages.

What remains are questions about sign language pedagogy. The questions are: How do the teachers teach sign languages? What and how do they learn how to teach? How do the teachers and learners use sign language to teach and learn academic and other scholastic subjects? How can the teachers tell that their learners are actually learning, acquiring, and using sign languages? These questions raise issues about instruction, curriculum, and assessment in sign languages as L1 and L2/ $L_n$ . There are published studies of descriptions of the use of sign language to teach academic subjects to deaf and hard of hearing who are users of sign language as their L1. They looked at how sign languages help signing deaf learners learn scholastic subjects such as reading, writing, and mathematics. Recent studies have looked at the psychological and psycholinguistic processing of sign languages and sign language acquisition by hearing learners who learn sign languages as their L2/ $L_n$ . However, as previously mentioned, the studies in sign language pedagogy are scattered across journals, books, and conference proceedings.

## ***The Handbook of Sign Language Pedagogy***

The *Handbook* is an overview of the current research studies and pedagogical practices in different aspects of the L1 and L2/ $L_n$  pedagogy in sign languages. There are four parts in the *Handbook*. Part I covers standards in sign language pedagogy. Part II contains chapters on the pedagogical uses of sign languages with children who are L1 users of sign languages. Part III includes chapters on the pedagogical uses of sign languages with learners of sign languages as their L2/ $L_n$ . Part IV comprises of chapters that discuss the different constituencies of sign language pedagogy such as learners, parents, and sign language interpreters. Part V contains chapters on resources that are used in sign language pedagogy. In each chapter, an introduction, theoretical perspectives, pedagogical applications, and future trends in research and practice are proffered. The introductory section outlines problems and issues in the area. The theoretical perspectives section is a discussion of the main concepts and theories. The pedagogical applications section explicates the programs, services, and strategies in sign languages. The section on future trends contains suggestions for future research topics and practical applications.

For the purposes of this book, the chapters focus on M1/L1 sign language users who are deaf and hard of hearing children, and M2/L2 and M2/ $L_n$  for the learners of sign languages who are largely hearing. In addition, for the purpose of discussion on pedagogy, the L2 is combined with  $L_n$  into L2/ $L_n$  to refer to learners who learn sign languages as another language, may it be their second, third, or additional language. The rationale is that the distinction between L2 and  $L_n$  has



not been ascertained by research studies to play a role in pedagogy. It has only been ascertained to play a role in language learning process and acquisition, and will be treated accordingly when research studies and subject populations are discussed in the chapters.

In Part I, one chapter examines the standards for sign language pedagogy. Standards are necessary to ensure conformity and standardization in knowledge and skills in pedagogy. Without standards in sign language pedagogy, teachers and practitioners were left to their own understanding of what language, linguistics, pedagogy, culture, and learning are, with the result being nonconformity and nonstandardization in sign language instruction, curriculum, and assessment. There are standards in many countries, and no standards in a few countries. Russell S. Rosen in Chapter 1 explores the issues of standards and its development, constituencies, and impact on pedagogical practices. In countries where there are standards in pedagogy, the standards are shaped by several institutional sources in public policy, research studies, pedagogical practices, and language communities. The constituencies of sign language pedagogy are teachers, learners, and practitioners. Different social institutions, which are the government education bodies, organizations of teachers, practitioners and researchers, and the deaf communities, have different standards and areas of jurisdiction for the different constituencies. Across the countries that have standards, they have different standards and configurations among the institutional sources for first, second, and additional languages. For purposes of explication, different models of standards in the US and the UK are discussed. Rosen argues that it is imperative that standards are established to ensure a level of quality, expectations, and attainments in knowledge and performance that are valued for sign language pedagogy in society to enhance professionalization and scholarly approach to pedagogy and learning, and that are emblemized in the form of degrees, certifications, licensures, and accreditations. The teachers should follow the standards in their development of curriculum and instruction strategies to ensure that the learners' learning outcomes will meet the standards.

Part II looks at sign language pedagogy, in particular the preparation of educators, the use of sign languages to teach and assess in scholastic subjects in classrooms with learners who are native L1 users of sign languages, and the political issues with L1 sign languages. The chapters cover teacher preparation and qualification, teaching approaches and strategies, the uses of sign language to teach reading, writing, mathematics and literature, the uses of different tests and assessment procedures, and the politics of sign language pedagogy in L1 classrooms.

No individuals should become teachers and users of sign language in classrooms with deaf and hard of hearing children without demonstrating that they have the knowledge and skills in sign language and pedagogy. There is a constant need for teachers who are competent not only to teach sign language as a L1, but also use sign language to teach scholastic subjects in classrooms of deaf and hard of hearing learners who are native L1 users of sign language. The pedagogical and sign language knowledge and skills are attainable at teacher preparatory programs. Katharina Urbann, Thomas Kaul, Leonid Klinner, Alejandro Oviedo, and Reiner Griebel wrote about sign language teacher preparation, qualifications, and development in Chapter 2. They looked at teacher preparation programs (TPP) that prepare individuals to become sign language teachers who will teach and use sign languages in L1 classrooms. The TPPs offer coursework, projects, and practicum experiences that focus not only on the teaching of scholastic subjects, but also deaf children's sign language development, Deaf culture, and sign language assessment. Urbann, Kaul, Klinner, Oviedo, and Griebel propose that, since the emphasis in the L1 classrooms is on the development of literacy in written and signed languages, TPPs should offer a bilingual and bimodal orientation that enable children to acquire both written and sign language literacy. The coursework, projects and experiences should be in the areas of linguistics, Deaf Studies, sign language assessment, sign language teaching, sign language curriculum development, language

acquisition, language acquisition, and research on bilingually educated deaf children. TPPs should also provide opportunities for future teachers to get involved in and maintain contact with the deaf community. The teachers should have an open and positive attitude and a keen interest in teaching sign language. An example of a TPP program with the above features from the University of Cologne is described.

L1 teachers develop different teaching approaches and strategies using sign languages that may affect learner proficiency in not only sign languages, but also scholastic subjects. Carolina Plaza-Pust discusses the different L1 sign language teaching approaches and strategies in Chapter 3. Research shows that sign language proficiencies are positively correlated with L2 written language proficiencies, reading comprehension, and spoken language use. In L1 classrooms, sign language is used as the language of instruction in not only sign language, but also scholastic subjects including written and spoken languages. Modeling after Cummins' Linguistic Interdependence Hypothesis, Plaza-Pust calls for the creation of sign bilingual classrooms that are built on the following assumptions and components: Sign language is the primary language of deaf learners, used as the language of instruction in L1 classrooms, helps deaf children develop metalinguistic awareness of the properties of the two languages, and aids the learning of spoken and written languages. For the signing deaf children, both written and spoken languages are viewed as second languages. Deaf learners' diverse social and cultural community affiliations and bilateral and identity developments should be promoted in bilingual classrooms. In bilingual classrooms teachers and learners make language choices and code-switch across languages based on individual and situational factors, such as to introduce a concept and vocabulary, translate across languages, and connecting and contrasting between sign and written languages. The order in the use of languages may vary, and translanguaging is found useful in some classrooms where languages of different modalities alternate between teachers and learners.

Sign language can be used to teach scholastic subjects, including teaching and learning how to read. In Chapter 4, Laurene E. Simms and Jean F. Andrews describe the uses of L1 sign languages to teach reading. Reading is an act of recognizing words and comprehending written or printed text, which requires language abilities in phonology, vocabulary, and semantics; high learner motivation; well-defined curriculum; and resourceful home and school experiences. In spite of orthographic differences between written words and signs, deaf native users use sign languages to process reading. Deaf bilinguals use sign language to mediate print, or use sign, spoken, and written languages to read. Modeling after Cummins' Linguistic Interdependence and Threshold Theory, Simms and Andrews argue that learners' proficiency in L1 sign language can be transferred to their L2 written and print languages. The learners would need to attain a high level of L1 competence to access L2 print and written languages and gain linguistic and cognitive benefits. In bilingual reading classes teachers and learners use simultaneous communication or total communication environments to support print literacy. A Reading-Thinking-Signing (RTS) strategy for the teaching of reading is proposed. It presupposes that reading comprehension involves both decoding ability and linguistic knowledge. Teachers in bilingual reading class use sign languages to teach decoding, language, and comprehension. Teaching strategies are proffered. Reading begins with word recognition, word-sign correspondences and its meanings, proceed to reading the whole text and, using sign languages, discussing its contents and progression, and ending with a discussion of language structures and textual cohesion.

Sign language can also be used to teach how to write as a scholastic subject. Krister Schönström and Ingela Holmström discuss the use of L1 sign languages to teach writing in Chapter 5. As an act of composing a text, writing is a problem-solving, decision-making and self-regulating process. Good writing skills require motivation and psychological, linguistic, pedagogical, social, and transcription skills. According to Holmström and Schönström, variation in writing skills among

deaf learners point not to deafness, but pedagogy as the problem. If sign languages are deaf learners' L1 languages, written languages are their L2 languages. There are similar developmental stages in grammatical constructions in writing among the deaf and hearing L2 written language learners. They make errors in inflectional morphology, contain limited vocabulary, and infrequently use cohesion markers. In writing classes with deaf learners sign languages are used to make sign-word correspondences, translate from sign language to written language, compare and contrast linguistic structures of two languages, develop and discuss ideas, and develop outlines. Examples from Sweden and Denmark are exemplified. Teachers identify literary objectives for learners. The teachers and learners follow writing processes used by expert writers, discuss ideas for writing, and compare sign and written languages. The teachers transfer control of text writing to the learners. They use sign languages including fingerspelling and chaining reading texts with signs to scaffold learners' writing process. The learning process becomes authentic when learners and teachers generate, revise, and publish textual pieces for an audience.

Like reading and writing, sign language can also be used to teach and learn mathematics as a scholastic subject. Christopher Kurz and Claudia Pagliaro explore the uses of sign languages in mathematics classrooms in Chapter 6. Mathematics is a language, and language is used to develop and manipulate mathematical concepts to express wants and needs in quantity, quality, size, amount, and time on a daily basis. Deaf children experience delayed mathematical language acquisition, highly variable language pedagogical approaches, and lack of access to mathematics vocabulary in sign languages in the K-12 classrooms. Mathematical concepts tend to be expressed in written form, and deaf children's reading difficulties magnified their difficulties in mathematical learning. Studies show that higher levels of metalinguistic awareness in sign languages are positively correlated with higher levels of mathematics achievement. Modeling after Cummins' Linguistic Interdependence Theory, Kurz and Pagliaro argue that signed language proficiency is transferable to written language proficiency, and that sign language as a language of instruction supports the learning of mathematical concepts for deaf children. They propose an academic sign language system built on semantically accurate sign vocabularies for teachers to use in their teaching of mathematics. A semantically accurate sign or classifier maps the underlying meaning onto numbers and other mathematical concepts such as numerator, denominator, fraction, proper fraction, mixed number, digit, base, exponent, subscript, superscript, coefficient, variable, term, and place value. Teachers and learners use the semantically correct mathematical sign vocabularies to count, create categories, memorize, draw space, and discuss story problems.

One of the aims of sign language education for deaf and hard of hearing children is to develop skills in sign language, which is sign language literacy. Sign language literature is a useful resource with which the children develop sign language literacy. In Chapter 7, Russell S. Rosen discusses the teaching of sign language literature in L1 classrooms to aid learners' sign language linguistic and critical literacy development. Sign language literature, like spoken and written language literature, are texts that contain thoughts, feelings, perspectives, experiences, and stories. Individuals watching and signing literary works learn how sign language is structured and its contents expressed in sign languages. In deaf education classes the tendency is for teachers to use sign language to teach sign language translations of written literature. Sign language literature is not written but contains works in sign language in various genres, namely, sign language stories, stories in sign language, handshape stories such as alphabet and number stories, and sign language poetry. Rosen proposes that teachers use literary works conducted in sign languages, either live or on videos, to aid deaf children develop their ability to use sign languages to express ideas, thoughts, messages, communicate with, and watch and understand other signers. In sign language literature classrooms teachers and learners use sign language to draw information from,

retell, discuss, and develop sign language literary works. They learn how sign language literary works are created using the phonological, morphological, morphosyntactical features including classifiers, syntactical, semantic, and pragmatic features of sign languages. They also use sign language literary works as archetypes to create their own stories. Examples of lesson structures for comprehending and creating sign language literature are given.

To ensure that the learners are mastering sign languages, they need to take tests and other assessments. Teachers and educator evaluators develop the assessments. Tobias Haug, Wolfgang Mann, Joanna Hoskin, and Hilary Dumbrell examine different sign language tests and assessment procedures in Chapter 8. Assessment tests and procedures in L1 sign languages are developed to assess and monitor deaf children's native sign language development. However, the development of assessment tests and procedures has been delimited by several factors such as the limited research studies that are available on the structure and acquisition of sign languages, the small size and heterogeneity of the deaf population, and the heterogeneity of deaf children in terms of their language acquisition. The psychometric properties of validity and reliability in assessment tests are described. Haug and colleagues propose an argument-based framework in assessment, which are that assessment results and research findings are used to justify claims on the children's mastery of L1 sign languages. In this sense, they suggest that within the argument-based framework, construct validity is to be the standard to justify scores and claims. Different tests and assessment instruments in different sign languages that are used by teachers and practitioners at schools are arranged and reviewed by language target such as vocabulary and grammar; test response solicitation such as receptive and/or productive skills; target group such as babies, toddlers, and children; the sign language(s) for which tests are initially designed; and the sign language(s) for which the tests are adapted.

The provision of sign languages in education with deaf and hard of hearing individuals is made possible by the political forces that enabled the allocation, distribution, and use of sign languages in L1 classrooms. Ronice Müller de Quadros and Robert Hoffmeister exemplify the politics of L1 signed language pedagogy in Chapter 9. Sign language pedagogy has been besieged by issues of power, status, and policies regarding language and culture for deaf individuals among the medical and audiological practitioners, hearing educators, and members of the Deaf World. These groups differ in perspectives on signed language, that is, whether it is a problem, a resource, or a right. Research in neurolinguistic imaging show that brain has the capacity to segment the linguistic stream in signed languages as they do in spoken and written languages. Deaf children have certain epistemologies or "ways of knowing" in their learning, particularly in the reading process. Quadros and Hoffmeister take the position that signed languages are L1 for deaf people because it is visual and easily accessed and acquired through the eyes, and should serve as a resource in L1 pedagogy. L1 signed language and Deaf culture should be incorporated in the school curriculum. The curriculum should take a sign language-and-written language bilingual-bicultural orientation. Instruction and learning in L1 sign languages should align with L1 signed language acquisition. Deaf cultural information should be used in classrooms to aid Deaf cultural identity development. Teachers in deaf education classrooms should employ strategies that enhance reading and writing abilities of deaf children using signed languages. An example is the Reading-Thinking-Signing (RTS) strategy in the teaching and learning of reading, whereby deaf children develop and connect fingerspelling ability, vocabulary, and reading comprehension using multimedia products in text, pictures and images, and sign languages.

Part III examines the teaching, assessment, and politics of sign language in classrooms with learners who are L2/*L<sub>n</sub>* learners of sign languages. The chapters cover teacher preparatory programs, course design in L2/*L<sub>n</sub>* pedagogy, teaching approaches and strategies in L2/*L<sub>n</sub>* classrooms, the teaching of sign language fingerspelling, vocabulary, and grammar, sign language

literature, L2/*Ln* sign language tests and assessment procedures, and the politics of teaching sign languages to L2/*Ln* learners.

While there is a worldwide growth in classes in sign language as L2, a few countries offer teacher preparatory programs (TPP) in L2 sign language pedagogy. Teachers and practitioners who do not enroll in a TPP tend not to have a foundation in language, learning, and culture, and practical experiences in pedagogy. They would depend on their intuitions and presumptions. Individuals wishing to teach sign language as L2/*Ln* should enroll in a TPP. In Chapter 10, Russell S. Rosen and James Woodward examine L2/*Ln* sign language teacher preparation, qualifications, and development. The offerings in TPPs vary by national and local education regulations in countries where the TPPs are located. Rosen and Woodward describe a few exemplars in L2 sign language TPPs in the US and in Asia. They propose that TPPs should prepare individuals to become professionals as teacher-researchers who teach in a highly scholarly manner and as a contextualized, investigatory, cultural, and problem-solving endeavor. To this end, the TPPs should offer coursework, research, and practicum experiences on language, linguistics, anthropology, sociology, culture, arts and literature, pedagogy, language learning process and acquisition, curriculum development, assessment, and classroom behavior management. The individuals who are interested in becoming L2 sign language teachers should have learner teaching and practicum experiences and conduct classroom research studies.

Teachers who are teaching sign languages as L2/*Ln* would need to know curriculum and how to develop courses in L2/*Ln* classrooms. Alejandro Oviedo, Reiner Griebel, Thomas Kaul, Leonid Klinner, and Katharina Urbann proffer course design in L2/*Ln* sign language pedagogy in Chapter 11. In countries where there are courses in L2/*Ln* sign languages, the curricula tend to be adaptations in forward design fashion from curricula used in L2/*Ln* spoken languages. Currently, the curricula are learner-centered and grounded on standards, research studies, and learner outcomes. Instruction is conducted with activities and tasks. Different curricula such as Frankfurt, Grundkurs, Desire, LIBRAS, Australian Auslan, and Confederación Nacional de Sordos de España (CNSE) are reviewed. Each curriculum is analyzed for content, process, and outcomes. The content includes vocabulary, grammar, pragmatics, sociocultural contents, and functions and forms of sign languages. The process includes teaching messages, uses of sign languages, and teacher and learner characteristics and styles. Outcomes include knowledge and communicative skills based on standards. Oviedo and colleagues found that the different curricula vary in content, process, and outcomes. They propose that educator practitioners should consider the content, methodology, outcomes, time distribution, and course planning in curricula design that is learning-centered and forward-designed.

The issue for the teachers is the technique in teaching, including curriculum and instruction, that will generate higher learner outcomes. Due to limited theoretical and empirical knowledge in L2/*Ln* sign language pedagogy, signed language teachers rely on their intuition and understanding of language and culture. Different teaching approaches and strategies in L2/*Ln* sign language are reviewed by Elideia L.A. Bernardino, Maria C. da C. Pereira, and Rosana Passos in Chapter 12. Current instructional methods are language-centered, learner-centered, and learning-centered. They posit that sign language teachers should be transformational intellectuals and critical pedagogists, or agents of change, that have the potential to affect the lives of their learners. Opportunities should be created for teachers and learners to immerse themselves into Deaf cultures and participate in the deaf community. Modeling after Kumaravadivelu, Bernardino, Pereira, and Passos proffer a Post-method Pedagogy as an alternative approach in teaching technique. In this approach, teachers experiment with pedagogical solutions in a scholarly fashion that considers their teaching, learner outcomes, and the sociocultural environment of classrooms along the parameters of particularity, practicality, and possibility. In the Post-method Pedagogy,

the parameters include particularity in goals, lessons, content, and setting for particular learners; practicality in teaching that connects learners with contents; and possibilities for learner learning subjectivity and self-identity. The teachers need to devise clear objectives, learner learning goals, instructional materials, teaching and learning equipment, lesson procedures, and evaluation, and take into consideration the needs and motivations of learners, the availability of resources, the teachers' qualifications, the learning environment, learners' cultures, and the time available for instruction.

One of the topical areas in the teaching and learning of sign languages is L2/*Ln* is fingerspelling. Leah C. Geer discusses the teaching of L2 sign language fingerspelling in Chapter 13. Fingerspelling is the manual representation of printed alphabets. They are used in sign languages to represent print alphabet, and names and words from spoken languages for which there is no sign and may become lexicalized as a sign. The issue for L2/*Ln* learners is the production and reception of the shape and movement of the hands and fingers as fingerspelled alphabets are produced. L2/*Ln* learners perceive and produce fingerspelled words with marked shape more than unmarked shape. The length and alphabetical order in words in spoken languages are not the same as the fingerspelled string in sign languages. L2/*Ln* learners would need to be taught not only sign language fingerspelling of spoken language alphabets, but also lexical items. Geer suggests that teachers teach learners how to develop a flow in fingerspelling of a word that is not "bouncing" or "stamping." Fingerspelling should not be produced solely in the alphabetical order of letters in words. L2/*Ln* learners should be given direct access to lexical items and models of fingerspelling, the opportunity for consistent practice and be given feedback from teachers. An RSVP curriculum in the teaching and learning of fingerspelling is described.

Another topical area in the teaching and learning of sign languages as L2/*Ln* is vocabulary. In Chapter 14, Rachel E. Traxler and Kimi Nakatsukasa explore the teaching of L2 sign language vocabulary. In order to communicate and understand others, one needs vocabulary knowledge. L2/*Ln* learners of spoken languages rely on their L1 mental lexicon to connect with target L2/*Ln* vocabulary. L2/*Ln* learners of sign languages, in cases where they are L1 users of spoken languages, would need to learn target vocabulary in a visual-manual modality by connecting it with their L1 mental lexicon in the oral-aural modality. In addition, there is weak correspondence across sign language lexicon and spoken language lexicon. The issue for the teaching of L2/*Ln* sign language vocabulary is the mapping of meaning onto form, and form onto meaning in the languages. Research shows that some learners benefit from using or voicing L1 lexicon to aid in their learning of sign vocabulary. Other learners prefer learning sign vocabulary without using or voicing their spoken language lexicon. Because of variations in learners' processing abilities, teachers should differentiate their instruction, incorporate voice-on and voice-off instruction, and have the learners practice in comprehending and producing sign vocabulary.

Still another topical area in the teaching and learning of sign languages as L2/*Ln* is grammar. Russell S. Rosen in Chapter 15 reviews the teaching of L2 sign language grammar. Grammar, which contains morpho-syntactic devices for stringing words together into phrases and phrases into sentences, is another area that individuals need to know in order to express thoughts, have conversations, and understand other people. Grammar varies by topics, contexts, and relationships. To teach sign language grammar is to explicate rules and its usage in different contexts and for learners to develop grammar competence to have meaningful communication within the different contexts. Due to its visual and manual nature, certain features in sign languages distinguished it from spoken languages, which are non-manual facial and bodily expressions, constructed action, and classifier systems. There are different pedagogical approaches in sign language grammar. The approaches are behaviorism, rationalism, communication, conversationalism, cognitive linguistics, and translanguaging. They vary in topics, linguistic structures, and emphases on vocabulary and



grammar. The different approaches are premised on different assumptions about the linguistics and psychology of learning grammar that are based on the prevailing theories and approaches in linguistics, the psychology of learning and teaching, and the values of a society that dictate topical content. Pedagogically, grammar can be taught in various ways, namely, translations, drills, and rote memorization; analyzing linguistic rules; developing through communication; talking about content; and performing tasks. Other considerations such as the use of gestures, written language, cognitive strategies, and corpora in grammar teaching and learning are discussed.

Sign language literature is also another topic for teaching and learning sign languages in L2/*Ln* classrooms. Rachel Sutton-Spence discusses the teaching of sign language literature in L2/*Ln* classrooms in Chapter 16. As in Chapter 7, sign language literature includes works of artistic and cultural merit that are produced by deaf people using sign languages to reflect their worldviews. There are different genres of sign language literature and they are fiction and nonfiction, sign language folklore, poetry, and translations. Teachers who teach sign language literature should focus on its language and literary components, and demonstrate how sign language is used to produce literature. Teachers can provide their own literary works or draw on videos of sign language literary works. Teaching lessons entail analyzing the literary and linguistic aspects of sign language literature and teachers construct activities for learners to analyze and comprehend literature and develop stories. They should cover topics such as the notions of literature, sign language literature and its cultural roles and social contexts, oral literature, deaflore, narratives, cinematic stories, deaf humor, signing techniques, storytelling techniques, story structure, poetry and prose, styles, and future literature. Learners participate as audience members and create literature. In addition, there are five constituencies with whom sign language literature is used as part of pedagogical practice, each with different emphasis on the language and literary aspects. They are learners in courses and programs in conversational sign language, Deaf culture, sign language linguistics, sign language literature, and interpretation. Specific strategies in the teaching of literature for the different constituencies are suggested.

As there is an increased professionalization in L2/*Ln* sign language pedagogy, and a growth in the number of teachers, learners, interpreters, and other practitioners who teach, learn, and use sign languages as their L2/*Ln*, there is also an increased need to assess their sign language skills. In Chapter 17, David H. Smith, Jeffrey Davis, and Dan Hoffman discuss L2/*Ln* sign language tests and assessment procedures. They argue that the development of assessment instruments and procedures would need to follow the standards that are created by the governmental education entities, which use test results to help them determine whether to grant diplomas, certifications and credentials to learners, teachers, interpreters, and other practitioners. Smith, Davis, and Hoffman examine the *who*, *why*, *what*, and *how* of L2/*Ln* sign language assessments. The *who* is the audience for which the tests are designed. The *why* is the test purposes and its alignment with standards for diplomas, certifications, and credentials. The *what* is the psychometrics of validity and reliability and the domain areas of sign languages linguistics that the tests are assessing. The *how* is the test procedures and formats. The available L2/*Ln* sign language assessment tests and procedures are evaluated in terms of the above concerns. The remaining issues that need to be addressed are the use of the assessments cross-sectionally and longitudinally, inter-tests reliability, the highly subjective nature of evaluator ratings, and adaptations of available L2/*Ln* sign language assessments to countries where there are no assessments of their sign languages.

The acceptance, locations, and offerings of sign languages as L2/*Ln* depend on the countries' view of deaf people and their language, community, and culture. Timothy Reagan examines this issue in his exposition of the politics of L2/*Ln* sign language pedagogy in Chapter 18. Nations develop language policy and planning (LPP) that determines the selection, acceptance, and implementation of foreign or world languages. The nations' LPPs for foreign and world

languages are frequently shaped by their attitudes towards different language communities, and delimit the course offerings, curriculum, instruction and assessment of the L2/*Ln* languages. As the LPPs of the nations change, the pedagogy for L2/*Ln* languages also changes. While there is a worldwide proliferation of classes and programs in L2/*Ln* sign languages, political issues in nations affect the recognition, status, and distribution of L2/*Ln* sign languages in education for its inhabitants. The political issues for L2/*Ln* sign languages pertain to whether there is a disability, civil, and/or legal right for it to be offered in education. Reagan looked at the history of the US' LPP towards ASL as a case example, and described how the American LPP shapes L2 ASL pedagogy. L2 ASL pedagogy is tied with developments in deaf education. At American schools for the deaf in early nineteenth century, sign language was seen as the language of disability, and manual English was taught to hearing learners for educational and religious purposes at educational and religious institutions for the deaf in a *laissez-faire* fashion. The view of ASL evolved in late twentieth century into a language rights issue that was built on a civil rights model that promotes deaf-hearing communication, and the learners are taught ASL structural forms and communicative functions that follow government-mandated standards in general education institutions.

Part IV looks at the characteristics of different learners of L1 and L2/*Ln* sign languages. The chapters cover typical and atypical learners, interpreting learners, and (hearing) parents of deaf children. Teachers in L1 and L2/*Ln* classrooms where signed language is used as the language of instruction often encounter diversity in learning abilities among learners, including language aptitude and phonological short-term and working memories. Jenny L. Singleton, David Quinto-Pozos, and David Martinez examine the issues of typical and atypical signed language learners in Chapter 19. Typicality as measured in performance in signed language ability occurs when an individual falls within group mean, and atypicality occurs when an individual falls more than one standard deviation from the mean, although these are not the sole criterion, as assessment of individuals' language abilities need to derive from different data types. Signed language acquisition by native deaf children is found to parallel spoken language acquisition by hearing children. There are similar receptive and productive errors in the acquisition process for both languages. Some individuals do not progress in vocabulary, grammar, discourse, and narrative ability. They have developmental language disorder in their L1 signed languages, which may carry over to their L2 learning. Singleton, Quinto-Pozos, and Martinez find that learning signed language such as ASL is just as difficult for learners with attention deficiency disorders, and propose that those learners can make progress with therapeutic intervention, an area that is in need for signed language therapists. For some hearing learners with diagnosed spoken language or learning difficulties, signed language may be a viable L2/*Ln* option.

Deaf children are largely born to hearing parents, and the parents tend not to know, much less use, sign language. In many countries the parents tend to have their deaf babies receive neonatal hearing screening and early intervention services that focus on oral and aural language development. This has created communication difficulties and delays in the language development of many deaf children. In Chapter 20, Kristin Snoddon discusses sign education for parents, particularly those who speak and hear. Parent sign language education is based on the advocacy for deaf children to support communication between parents and deaf children. Snoddon proposes that parent sign education builds on the premises that deaf children are children, use sign language, are not ill, and will become adults and live with both deaf and hearing people. A plurilingual pedagogical approach that combines sign with written and spoken languages is suggested for parents to learn sign language as L2/*Ln*. Examples of parent sign education from the US, Canada, and Australia, and European and Scandinavian countries are described. Schools for the deaf and regulatory education bodies in these countries provide home visiting and outreach services to the families with teachers, social workers, parent educators, child psychologists, and deaf native



users. The home visiting services are given a few days weekly to support deaf children's language development through sign language in play and informal teaching. The schools also provide courses in sign language, storytelling, and child language development for the parents.

Some individuals who wish to become sign language interpreters would need to learn sign languages. Melanie Metzger, Keith M. Cagle, and Danielle I.J. Hunt in Chapter 21 explore the role of signed languages in interpreter education, both in the teaching and the use of L2/*Ln* signed language in interpreting classrooms. The development of signed language interpreter education has been need-driven, rather than theory-driven. Interpreter education programs were often developed to meet a legislated need and focus on signing and voicing skills. Research in the education of interpreting learners and the process of interpretation are emerging. Metzger, Cagle, and Hunt took a survey of interpreter training programs particularly in the US as an example and found variations in enrollment and exit requirements, course content, sign language form of instruction, and language immersion. The most pressing future trend is towards a research-driven and evidence-based pedagogy of interpretation studies. Metzger, Cagle, and Hunt suggest that interpreter training programs offer interpreting learners a variety of interpretation courses that focus on cognitive processing in interpretation; translation, consecutive, and simultaneous interpreting skill development; sign systems used in the deaf community; and ethical decision making and business practices. Classes in interpretation should focus on the transfer of meaning between a sign language such as ASL and a spoken and written language such as English. The grammar-translation and Direct Method approaches should be used in the teaching of sign languages to interpreting learners since these approaches allow the learners to compare the two languages' lexicon, grammar, and semantics.

Part V proffers the resources that are used in sign language pedagogy. In particular, the chapters discuss the technologies and sign language corpora that can be used in both L1 and L2/*Ln* sign language classrooms. Technology has increasingly played an important role in teaching thanks to recent developments in human-machine interaction, robotics, and smart devices. Hatice Kose and Pinar Uluer review the uses of technology in sign language teaching and learning in Chapter 22. The sign recognition systems include kinect and body sensors to record and show signs. The e-learning platforms contain dictionaries and instructional materials such as lessons, videos, and assignments. Robots have the capacity to communicate with learners. Virtual reality and avatar-based systems provide environments and virtual individuals with which learners perceive and express information in sign language. These developments enabled practitioners and researchers to recognize sign language, translate signs to words and vice versa, generate signs and words, and serve as e-platforms for courses, instructional materials, and presentation of lessons. While technology does not substitute teaching, it has become an assistive tool for practitioners and researchers. Examples of technological devices that can be used in sign language classrooms are smart mobile-internet based applications, e-learning platforms, and robotics. Teachers who use technology in sign language classrooms can use different technologies such as web platforms on computers, mobile applications, and humanoid robots to create and review materials; record and translate signs; and teach, tutor, assess, and provide feedback and corrections to learners. Learners use the technologies to learn, review, and receive feedback and corrections, and to translate, answer, record, and create their materials.

Corpus in sign languages has increasingly been used by teachers and in classrooms as a resource in the teaching and learning of sign languages. Lorraine Leeson, Jordan Fenlon, Johanna Mesch, Carmel Grehan, and Sarah Sheridan reviewed the use of corpus in L1 and L2/*Ln* sign language pedagogy in Chapter 23. A corpus is a collection of vocabularies, phrases, and sentences that are drawn from spoken and printed texts that is representative, installed in machine-readable form, and acts as a standard reference in languages. Corpora have a role in research as well as in

pedagogy. Sign language corpora contain information about language form, function, variation, and grammatical structures based on frequency patterns and register-specific discourse in sign languages. It also contains videos of signers signing exemplars in sign language lexical, phrasal, and grammatical structures. Leeson, Fenlon, Mesch, Grehan, and Sheehan suggest that the corpora can be used in a number of ways that promote active learning. Examples of corpus-based sign language teaching from Sweden and Ireland are described. Modeling sociotechnical theory, they proposed that language learners develop the corpora to install vocabularies, phrases, and sentences on the computer, and use the corpora to discover patterns and make generalizations about sign language form and use. Teachers develop exercises for the learners to identify, search, and observe concordance patterns in lexical, phrasal, and syntactical features of sign languages. To support learners, teachers provide feedback and direct them towards particular components in the corpus.

### Considerations on terminology

There are areas for consideration regarding the terms that are used in the chapters of the *Handbook*. They are the distinctions between the terms “Deaf” and “deaf,” and “signed” and “sign” language. The terminologies are constantly debated in the research community. The former debate pertains to the perceptions of deafness, and the latter debate hinges on the linguistic congruence with other languages.

Regarding the terms “Deaf” and “deaf,” the argument is that the latter term refers to the audiological condition and the former refer to the cultural condition of deafness. Individuals are considered as “deaf” individuals if they experience a lack of hearing, hearing difficulties, or limitations; do not use sign language but largely use speech to communicate; and do not involve in the Deaf community and cultural activities. Individuals are considered as “Deaf” may or may not lack or experience hearing limitations, but prefer to use sign language to communicate, and participate in the Deaf community and cultural activities. The terms are intrinsically vague. Regarding the term “deaf,” an argument is that it can be taken as a generic term that encompasses all individuals who lack or have hearing limitations regardless of language preference for communication. Another argument for the use of the “deaf” term is that there are individuals who may be born as culturally Deaf, particularly to signing Deaf parents, but can in the process prefer not to use sign languages or participate in the Deaf community and cultural activities. Regarding the term “Deaf,” an argument is that there are hearing individuals who use sign languages as their preferred language of communication and participate in the Deaf community and its cultural activities, which suggest that the lack of hearing or hearing difficulties are not necessary conditions for the designation.

Regarding the terms “signed” and “sign” language, the argument hinges on the conjunctions between languages of different modalities. The argument for the use of the term “signed” with the “-ed” ending is that researchers use the term “spoken” to refer to the languages that are grounded on the oral and aural modality. By implication, the term “signed” with the “-ed” ending should refer to the languages that are grounded on the visual and manual modality. Another argument holds that the linguistic constructions of the languages that are “signed” are comparable to the languages that are “spoken,” which should justify the use of the term “signed languages.” However, a contrastive argument can be made that the term “signed” aligns the languages to the oral and aural modality of “spoken” languages. Because the two languages differ in modality, the visual and manual languages should be called as “sign” languages. Still another argument in favor of the term “sign” is that it includes the different languages of the world such as American Sign Language, British Sign Language, French Sign Language, German Sign

Language, Sign Language of the Netherlands, Swedish Sign Language, Japanese Sign Language, and all other sign languages. In this case, “signed” is not designated in, and “sign” is seen as a generic term that refers to all formally named sign languages of the world.

The contributors of this *Handbook* varied in the terms they chose to use in their chapters. Some contributors used the term “deaf” while other contributors used “Deaf.” One chapter uses “d/Deaf.” In addition, some contributors used the term “sign” while others used “signed.” Only in a few chapters the contributors wrote their decision to use the terms based on their arguments regarding the issues they examined. Most chapters did not contain an explanation of the choice of terminologies. This might create confusions across the chapters about the terms and the languages and constituencies to which the terms refer.

The decision of the editor for the *Handbook* is as follows. Only the term “sign” is used in the titles of chapters and the whole *Handbook*. Within each chapter, the contributors choose the “sign” and “signed,” and the “deaf” and “Deaf” terms based on their viewpoints regarding the issues and its constituencies they present. To standardize terminologies is to create a uniformity of the constituencies throughout the *Handbook* that masks the complexities of the issues. The chosen terminologies reflect the contributors’ tackling of the pedagogical issues and its constituencies. The contributors of the chapters were given the discretion as to the terms they decide to use in their chapters, and express their own views on the issues.

# Part I

## Standards

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# Standards in sign language pedagogy

*Russell S. Rosen*

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## Introduction

Teachers and educational practitioners conduct pedagogical activities in sign language as L1 and L2/ $L_n$  with children and adults. They develop curriculum, instruct, and evaluate their learners' learning. Underlying the pedagogical activities are presumptions about the aims and effectiveness of language instruction and the content domains in instruction, curriculum, and assessment. The presumptions are dictated by the goals of a community of language users. The community goals pertain to the domains and levels of achievement and the means for reaching it.

However, in many countries there are no standards in sign language pedagogy. Consequently, there is nonconformity and nonstandardization in sign language instruction, curriculum, and assessment. Teachers and practitioners often revert to their own understanding of what language is, how to teach it, how learners learn, and how to assess learners' language knowledge and skills. Without an understanding of language, its transmission, and assessment among teachers and learners, a plethora of knowledge and skills may result, with the consequences being the lack of uniformity in language constructions, the teaching and learning of the language, and language abilities among teachers and learners within and across sign language classes.

There is a need to ensure conformity and conjunctions in sign language pedagogy in classes within and across countries. In addition, there is a need to enhance quality assurance in language pedagogy, the professionalization of teachers, and the use of research- and evidence-based data to guide pedagogical language activities. These needs for quality assurance provide the impetus for the development of standards not only in language instruction, curriculum, and assessment, but also language classes and programs, teacher preparatory programs, and teacher development and qualifications. Below are the theoretical constructs in standards.

## Theoretical perspectives

Standards are a set of domain areas and a level of quality, expectations, and attainments in knowledge and skills in the domain areas. They are the "ought to have" in knowledge and performance that are deemed as important in society. It is a value system, a product and a process. In

standards, the value system is a set of domains that is worth knowing and skilling on, the product is a set of benchmarks, and the process is a series of protocols that reach the benchmarks. The purposes of standards are to ensure that individuals have the knowledge and understanding of the concepts in a domain area and skills in performing tasks effectively. Individuals who meet the standards are endowed with recognition.

The standards in pedagogy contains benchmarks, or milestones, of knowledge and skills in the domain areas of instruction, curriculum, and assessment. They also include protocols, or procedures, for performances that demonstrate the knowledge and skills that meet the benchmarks. The benchmarks and protocols in the standards are measured as outcomes in rubrics that are used to determine qualifications (Taut & Sun, 2014). Individuals in the fields of pedagogy who meet the standards are endowed with different forms of recognition such as degrees, certifications, licensures, and accreditations. The standards are developed to ensure higher learner achievement and teacher quality, and bring professionalism into the field of language pedagogy and learning (Phillips, 1999; Call, 2018). By focusing on the quality and assurance in pedagogy, the standards have an impact on language teaching, course design, testing, and educational policy (Cox, Malone, & Winke, 2018), and learners' learning performances (Troia, Olinghouse, & Wilson, 2016). Research studies found that learner outcomes are positively correlated with board certified teachers who meet the standards (Belson & Husted, 2015), and where assessments are closely aligned with the standards (Troia, Olinghouse, & Zhang, 2018). This chapter does not cover interpreters; it covers the constituencies that are involved in instruction, curriculum development, and assessment.

There are different standards for different constituencies of pedagogy, which are learners, teachers, practitioners, and teacher training programs. Different social institutions hold the responsibility to develop, oversee, and monitor standards for the different constituencies. In addition, standards vary by countries, states and provinces, and by sources within the countries. The standards and its constituencies and controlling institutions in sign language pedagogy are discussed below.

### *Standards in sign language pedagogy*

Different sources contribute to the development of items in the standards for curriculum, instruction, and assessment. The constituencies in sign language pedagogy use standards to ascertain their knowledge and skills in curriculum, instruction, and assessment for degrees, certifications, licensures, and accreditations. The following information on standards in each area of pedagogy is drawn from works by Phillips (1999), Ricento (2006), and Tollefson (2013).

#### *Standards for curriculum*

The standards for curriculum cover the scope and sequence of content topics; lesson plans and its learning objectives, teaching goals, prerequisite knowledge, sign vocabulary and grammar, conversation tasks, instructional materials, and assignments; and evaluation of learners' learning and teachers' teaching. The standards for curriculum in L1 and L2/*Ln* sign language classrooms are similar, with one difference based on the goals and ideologies of governmental education bodies that develop the standards. The similarities are that the curriculum tends to begin with basic everyday and high-frequency vocabulary and basic grammatical structures, and ends with inflected forms, complicated grammatical structures, and discourses. It also includes information about culture such as the language community and their history, beliefs, behaviors, traditions, arts, and literature. The difference is that in L1 curriculum, teachers and learners use sign language to teach and learn academic subjects, including sign language.