

# **ASL/ENGLISH BILINGUAL EDUCATION: MODELS, METHODOLOGIES, AND STRATEGIES**



Photo credit: Clerc National Deaf Education Center

## **KEY FINDINGS**

### **AUTHOR**

Maribel Gárate, Ph.D.



National Science Foundation  
and Gallaudet University  
Science of Learning Center  
on Visual Language and  
Visual Learning, VL2  
Grant No. SBE-1041725

- Early access and exposure to a natural language, whether signed or spoken, initiates the language acquisition process required for literacy development and bilingual competence.
- In order for a child to benefit from the cognitive advantages of bilingualism, the development of both languages needs to be fostered in all social and academic interactions.
- Additive bilingualism aims to develop proficiencies in two languages.
- A developmental bilingual program addresses the social and academic language needs of diverse deaf learners while also providing instruction in content areas.
- Developing competence in two languages requires deliberate and careful planning for the use of the two languages.
- Effective use of bilingual practices hinges on the planned allocation of the two languages in the classroom.
- Bilingual teachers base their selection of bilingual practices and strategies on the students' linguistic skills as well as the content at hand.

# ASL/English Bilingual Education

## Models, Methodologies, and Strategies

Maribel Gárate, Ph.D.

---

### Models for Bilingual Education

---

**B**ilingual education in the United States dates back to the 1800s, but currently, the term “bilingual education” is used to refer to a variety of programs, models, methods, and approaches which are in turn individually defined by the state, district, or school where they are implemented.<sup>1</sup>

Because of this variation in practice, it is important to differentiate between the two main types of bilingual education; these two models differ on the ultimate goal for language use.<sup>2</sup>

The two main types of bilingual education are the transitional and maintenance models, also referred to as the subtractive and additive models. In transitional or subtractive models, language minority children are educated with the goal of shifting away from the native language to the exclusive use of the majority language.

The aim in subtractive models is monolingualism. Maintenance, or additive, models support the development of the native language while also fostering acquisition and use of the majority language. The aim of the additive model is bilingualism and biliteracy.<sup>2</sup>

---

### Additive Bilingualism

---

Two research-based principles are important for additive bilingualism. First, additive bilingualism draws upon the existence of a common core of cognitive and linguistic proficiencies that are shared by two (or more) languages and benefit their development.<sup>3</sup> Secondly, additive bilingualism builds upon research that shows that first-language proficiency is a powerful predictor of second language development.<sup>4</sup>

Knowledge, experiences, and proficiencies developed in one language can be accessed to support the development of the other language. Within additive bilingualism, a developmental bilingual program fosters the students' first language, teaches the second

“**First-language proficiency is a powerful predictor of second language development. Knowledge, experiences, and proficiencies developed in one language can be accessed to support the development of the other language.**

language, and provides content instruction using both languages.<sup>2,5</sup>

Fluent bilingualism results in mental flexibility, creative thinking, communicative



sensitivity, and concept development.<sup>2,5,7</sup> However, in order for students to derive these benefits, they need to achieve bilingual competence. Therein lies the importance of developmental bilingual programs, which are designed to promote consistent and strategic use of two languages in the classroom.

An important component of achieving competent bilingualism is the development of conversational and academic proficiencies in both languages.<sup>3,8</sup> Conversational

proficiency refers to a child's ability to use and understand a language in the context of everyday life during face-to-face conversations.

Academic language proficiency requires that children use and comprehend concepts and vocabulary in academic settings (with minimal contextual support) as well as be able to manipulate this information for different purposes (e.g. comparing, evaluating, analyzing).<sup>3</sup>

---

### Relevance for Deaf Children

---

Early and consistent access to a language is vital to its acquisition and continued development, and this access forms the basis for later literacy development.<sup>9,10</sup>

Much like hearing bilinguals, deaf children also have the need for access to and development of a first language in addition to instruction in the majority language; they also need recognition of both languages and cultures and a quality education.<sup>2,5,11,12</sup>

Unlike hearing children who typically acquire the language of the home as their first language, deaf children differ in their experiences with accessing and attaining fluency in a first language.



Photo credit: Amber Hajek & Ruth Reed

These differences rest on the quality and quantity of access to a signed and/or a spoken language, and the age when this access occurs.<sup>13,14</sup> When the home language is a spoken language and it is not readily accessible to the child, developing a first language through auditory means alone may be an arduous process.

Delays in first language acquisition affect cognitive development and consequently academic achievement.<sup>10</sup> In contrast, research suggests that early exposure to a natural signed language provides the linguistic stimulation to begin acquisition.<sup>13</sup> Early access to visual language also supports and accelerates speech development<sup>15,16</sup> and lays the foundation for literacy instruction.<sup>17</sup> The use of and instruction in both ASL and English offered by a developmental bilingual program can provide deaf children with the foundation they need to take advantage of the benefits of competent bilingualism.

---

## What is ASL/English Bilingual Education?

---

American Sign Language/English bilingual education adheres to the principles of additive bilingualism and the design of developmental bilingual programs. The aim is to develop social and academic proficiencies in both ASL and English.

Educators in ASL/English bilingual programs consider the varied needs of deaf children who may enter school having had: 1) full access to ASL; 2) partial access to English only; 3) simultaneous access to both ASL and English; or 4) limited or no access to either language. Children with simultaneous access include those who are exposed to ASL and also receive auditory benefits from a hearing aid or a cochlear implant.

ASL/English bilingual education incorporates knowledge, pedagogy, and methodologies from general bilingual education. To that end, ASL/English bilingual education also includes English as a Second Language (ESL) instruction and best practices in literacy instruction for second language learners.<sup>18</sup> ASL/English bilingual education stresses the importance of ASL and English in the lives of deaf

children as well as their need to develop the expressive and receptive language abilities linked to each language. These abilities include signing, attending to signs, reading, writing, and listening and speaking to the degree that is appropriate for individual students.<sup>19,20,21</sup> In addition, students' abilities to fingerspell, read fingerspelling, lipread, and mouth English visemes are also emphasized because these incorporate skills from both languages.<sup>18,20</sup>

---

## Methodologies for Language Use in the ASL/English Bilingual Classroom

---

Bilingual practices that support ASL/English instruction for deaf children have their origin in general bilingual education. These practices facilitate the distribution and use of the two languages in the classroom and ensure that each is given appropriate time and value.

Conscious selection and strategic use of each language leads to planned allocation, and this is necessary for the development of both conversational and academic competencies.<sup>2,5,22</sup>

Bilingual allocation is divided into two broad categories based on how and when the two languages are used: Language separation and concurrent use.<sup>2,5</sup> Bilingual programs must decide on the type of distribution that best fits the linguistic characteristics of their students.

### Language separation

Languages can be separated by place, time, person, or subject.<sup>2,5</sup> For example, a program that separates languages by subject has an ASL Language Arts class as well as an English Language Arts class.

To focus on English independent from ASL, teachers may schedule a written-English-only time.<sup>23</sup> Similarly, teachers who separate language use by place designate an area in the classroom for spoken English use where students can carry out small-group work after a lesson and a separate area for ASL where students can view videos or record signed assignments.<sup>21,26,27</sup>

Students benefit from language separation in that focusing on each language in one or more of these ways provides opportunities to use, study, and learn each language independent from the other and also to understand and practice purposes and functions in the two languages — reading, writing, conversing, clarifying, discussing, presenting — at school.<sup>18,23,25</sup>

While some general bilingual programs advocate for a strict separation of the two languages, ASL/English bilingual programs must be flexible in their selection to ensure that all students have access to communication and content.

### Concurrent use of language

The term concurrent use, as applied in general bilingual education, does not mean

simultaneous use for the obvious reason that the simultaneous use of two spoken languages is impossible.

Instead, the concurrent use of two languages within a lesson requires purposeful and planned switches between them in order to provide students with more immediate support for both.<sup>2,26</sup> In ASL/English bilingual classrooms, switches are planned between ASL and English in print or, when applicable, between ASL and spoken English in the course of a lesson.

Four ways to plan for concurrent language use include: ***Purposeful Concurrent Use***, ***Preview-View-Review***, ***translation***, and ***translanguaging***.

► ***Purposeful Concurrent Use*** is also referred to as planned or responsible code-switching.<sup>5</sup> The teacher alternates between the use of ASL and English in print during a lesson for the purpose of emphasizing a concept, exposing students to target vocabulary, or summarizing a topic.

For example, while teaching a lesson in ASL the teacher consistently writes down, highlights (in a presentation), or fingerspells key terms and definitions. As the lesson progresses, the teacher can provide summaries of main concepts — in the other language — to support the connection between the content and both languages.

When the lesson is taught in ASL, the teacher can also provide structured notes that students complete as they follow along with the lesson.

► ***Preview-View-Review (PVR)*** aims to make both language and content accessible. Teachers preview, or introduce, the lesson in the students' first or dominant language, view, or teach, the lesson in the second or

developing language, and review, or wrap up, the lesson using the first language.<sup>27</sup>

Language selection for PVR lessons can also be reversed. Preview the lesson in the second language. View the content in the first language and review the lesson in the second language. For example, the teacher previews the lesson in ASL using a PowerPoint, Prezi or notebook presentation.

Doing so will provide visual support with the overview, and students receive important contextual and procedural information for that lesson. During the view, the content can be covered in writing by using an online environment or a smart board. The teacher closes the lesson by using ASL to review the main points, and this allows students to contribute through discussion, reports, or presentations.

The selection of the order of language use should be a response to the students' bilingual proficiency and the difficulty of the content.

► **Translation** involves the expression of a message first presented in one language in the other language. In ASL/English bilingual classrooms, teachers often translate English text into ASL during read-aloud activities and content instruction.

However, the key to using translation to support bilingual development is its purposeful use. In other words, teachers need to have an instructional objective when they translate content for students. Translation is used to compare and contrast the characteristics of each language, to understand implicit meaning in text, and to explain the multiple meaning of words and signs. Its aim is to help students understand both meaning and form. When teachers

routinely translate without a specific aim, students can become dependent on them to access their lesser developed language, and the effectiveness of translation as a bilingual practice is diminished.<sup>2,26,27</sup>

► **Translanguaging** involves the presentation of the content in one language and expecting a product in another language. Input and output are always in different languages.

This practice is more often used in the middle and high school grades because the level of bilingual proficiency required for its use is higher.<sup>2,5</sup> In ASL/English bilingual classrooms, the teacher delivers the main content of the lesson in ASL, and the students complete the assignment in English. Alternatively, the class may read a selection from a textbook or carry on an on-line discussion on a topic in English and then discuss the content in ASL or submit a signed videotaped assignment based on the written content.

Selecting between the *separation* and the *concurrent use* of two languages and implementing corresponding practices ensures that intentional planning has taken place and prevents random switching between languages; such switches may interfere with the clarity of the message and the content.<sup>5,30</sup>

Three of the four methodologies have documented applications in bilingual classrooms for deaf children: Purposeful Concurrent Use,<sup>23,25,28</sup> Preview-View-Review,<sup>29</sup> and translation.<sup>30,31</sup> While translanguaging is a common practice with deaf students at the high school and college level, no study to date has documented its effectiveness.



## Strategies used in ASL/English Bilingual Instruction

Once teachers have selected a way to allocate the two languages in the classroom, they use a variety of planned and purposeful instructional strategies to support the development of ASL, English literacy, and oracy skills (or the ability to communicate fluently and grammatically in a spoken language) appropriate for individual students.<sup>20,32</sup>

### ASL and Content Development

The use of ASL videos as the source of instructional material is increasing in bilingual classrooms.

Both interactive viewing, which is led by the teacher, and independent or self-directed viewing, promote the use of ASL for academic purposes and functions, deepen students' conceptual and linguistic foundations in ASL, and provide examples of language separation.

The use of interactive ASL videos promotes engagement behaviors, which are linked to comprehension.<sup>33</sup> This practice allows students to analyze narratives, discuss story structure, and review subject-specific content in their most accessible language.

Interactive viewing has also been used to teach mathematics concepts in order to increase comprehension and production of content-specific vocabulary<sup>34</sup> as well as to teach aspects of English grammar.<sup>35</sup>

Access to technology in bilingual classrooms is a key component of this strategy. The proliferation of both free and commercial materials in ASL increasingly allows for a more equitable distribution of the two languages, an important aspect of additive bilingualism.



Photo credit: Matthew Kohashi

### Strategies for ASL and English Bilingual Development

ASL/English bilingual teachers practice bridging strategies to help deaf students understand the similarities and differences between their two languages.

Some teachers explicitly compare and contrast ASL and English structures to develop linguistic awareness in both languages.<sup>36</sup> Teachers engage in free translation during story-signing and story-reading to access the meaning of the text and do a follow up using literal translation to analyze the structure of written passages.<sup>28,30</sup>

Code-switching is also used at the word and sentence level to support developing bilinguals by providing conceptual, semantic, and grammatical connections between the two languages.<sup>37</sup>

Chaining and sandwiching strategies — where the teacher directly links signs to printed information, objects, concepts, and definitions<sup>38,39</sup> — are forms of code-switching that emphasize

concept development in both languages at the word level. Lastly, the use of both fingerspelling and lexicalized fingerspelling, a morphological process that brings new signs into ASL from their fingerspelled form, have been used to introduce and teach new English vocabulary and to facilitate English decoding; positive correlations have been found between the use of these two techniques and vocabulary recall and reading comprehension.<sup>40,41,42</sup>

Similar strategies are used in bilingual classrooms for deaf students around the world. Translation is used in Sweden<sup>43</sup> and Greece,<sup>44</sup> and contrastive teaching strategies in Sweden<sup>43</sup> and Spain.<sup>45</sup>

Initial research on programs that self-

identified as bilingual/bicultural reported that large variability existed across program descriptions. These differences included variation in educational philosophies, language use, and language fluency among teachers.<sup>46,47</sup>

Because bilingual practices must respond to the linguistic needs of the students, some variation is to be expected at the classroom level. However, once a developmental program design is selected, it should be clearly and consistently articulated by administrators, teachers, staff, and community stakeholders. Evidence of adherence to a bilingual model should be present in the school's philosophy and mission and be evident in the teachers' daily instructional practices.

---

## Current and Future Research

---

Research that has measured the impact of bilingual programming on students' academic performance has found positive results on measures of ASL competency and English literacy and specifically on standardized test performance in vocabulary, reading comprehension, and language subtests.<sup>22,48,49</sup>

However, these studies represent a small fraction of bilingual programs and the teachers and students within them, and so there is need for additional research that can address, at minimum: 1) the characteristics of successful programs; 2) the bilingual practices used with various students and within specific language allocation choices; 3) the impact of bilingual education on linguistically diverse deaf learners, their bilingual development, and academic success.

Additional questions raised include:

- How can ASL/English bilingual education be implemented across educational placement types (e.g. in public schools)?

- What is the impact of teachers' language fluency and bilingual training on instruction?
- How is ASL development evaluated and monitored at school?
- What curriculum materials and resources are used with bilingual deaf children?

Research on teachers who have received bilingual training has focused on the teachers' beliefs about bilingual deaf education and the implementation of bilingual practices with deaf students. Findings report that teachers welcome the new knowledge and find it applicable to deaf students.

Bilingual practices allow them to: 1) see students as developing bilinguals; 2) make language and content instruction a part of their planning to address the linguistic needs of the students; and 3) provide them with the tools to allocate language use to develop social and academic competencies in both languages.<sup>23,24,30,50,51</sup>



---

## Translating VL2 Research

---

The National Science Foundation Science of Learning Center on Visual Language and Visual Learning (VL2) publishes research briefs as a resource for parents, educators, and others who work with deaf and hard of hearing children. These briefs review important research findings, summarize relevant scholarship, and present informed suggestions for parents, educators, and professionals.

The information provided in this brief is intended to explain models, methodologies, and strategies for ASL-English bilingual education as well as to explain the importance of these for the early language development of deaf and hard of hearing children.

---

### VL2 Resources for Your Family and Your Classroom

---

Scientific discoveries from the National Science Foundation Science of Learning Center on Visual Language and Visual Learning (VL2) at Gallaudet University have provided foundational knowledge that has been used to create important evidence-based translational resources.

Key discoveries that contribute to VL2's translation of science span multiple VL2 laboratories and include the discovery that early exposure to a visual language provides visual processing and higher cognitive processing advantages; early bilingual ASL and English exposure provides powerful dual language benefits; and visual sign phonology plays an important facilitative role in the young deaf child's early acquisition of reading English in the same way that sound phonology has a facilitative role in young hearing children's accessing of meaning from English print.

VL2 has created translational, educational, and ethical resources for educators, practitioners, policymakers, parents, researchers,

and the greater public. For more information, see:

- [vl2.gallaudet.edu](http://vl2.gallaudet.edu)
- [www.vl2storybookapps.com](http://www.vl2storybookapps.com)
- [www.vl2parentspackage.org](http://www.vl2parentspackage.org)

---

### Gallaudet University Department of Deaf Education

---

Dr. Gárate is a faculty member with Gallaudet University's Deaf Education department. The Deaf Education department offers graduate and postgraduate programs to prepare professional personnel to work with all ages of deaf and hard of hearing children in various kinds of educational programs and settings.

Programs are designed to meet students' individual needs and interests and are open to hearing, deaf, and hard of hearing individuals.

The Department of Education's model of professional preparation and development values American Sign Language and English as equally important for facilitating curriculum content and cultural literacy; the model supports the development of reflective professionals who review the teaching-learning process and engage in critical appraisal and problem-solving.

The Department of Education prepares professionals to interact and communicate fluently with deaf and hard of hearing people and with children and youth with diverse family backgrounds and learning characteristics. The department's programs prepare graduates for advocacy and leadership roles, and to establish partnerships with deaf adults, parents, colleagues from multiple disciplines, and community and professional organizations.

For more information on Gallaudet's Deaf Education Department, visit: [http://www.gallaudet.edu/Education/Graduate\\_Programs.html](http://www.gallaudet.edu/Education/Graduate_Programs.html).

---

## References

---

1. Ovando, C., & Collier, V. (1998). *The politics of multiculturalism and bilingual education: Students and teachers caught in the crossfire*. Boston: McGraw Hill.
2. Baker, C. (2006). *Foundations of bilingual education and bilingualism* (4th ed.). Clevedon, UK: Multilingual Matters.
3. Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students. In California State Department of Education (Ed.), *Schooling and language minority students: A theoretical framework*. (pp. 3-49). Los Angeles, CA: Evaluation, Dissemination, and Assessment Center, California State University, Los Angeles.
4. Hakuta, K. (1990). Bilingualism and bilingual education: A research perspective. *Occasional Papers in Bilingual Education*, 1, 2-15.
5. García, O. (2009). *Bilingual education in the twenty-first century: A global perspective*. Maiden, MA: Wiley-Blackwell.
6. Hamers, J. (1998). Cognitive and language development of bilingual children. In I. Parasnis (Ed.), *Cultural and language diversity and the deaf experience* (pp. 51-75). New York, NY: Cambridge University Press.
7. Bialystok, E. (2007). Cognitive effects of bilingualism: How linguistic experience leads to cognitive change. *International Journal of Bilingual Education and Bilingualism*, 10(3), 210-233.
8. Cummins, J. (2006, October). *The relationship between American Sign Language proficiency and English academic development: A review of the research*. Paper presented at the conference Challenges, Opportunities, and Choices in Educating Minority Group Students, Hamar, Norway. Retrieved from [http://www.gallaudet.edu/documents/cummins\\_asl-eng.pdf](http://www.gallaudet.edu/documents/cummins_asl-eng.pdf)
9. Goldin-Meadow, S., & Mayberry, R. I. (2001). How do profoundly deaf children learn to read?. *Learning Disabilities Research & Practice*, 16(4), 222-229.
10. Visual Language and Visual Learning Science of Learning Center. (2011, January). *Advantages of early visual language* (Research Brief No. 2). Washington, DC: Sharon Baker.
11. Johnson, R. E., Liddell, S. K., & Erting, C. J. (1989). *Unlocking the curriculum: Principles for achieving access in deaf education* (Working Paper 89-3). Washington, DC: Gallaudet Research Institute, Gallaudet University.
12. Grosjean, F. (2008). *Studying bilinguals*. Oxford, UK: Oxford University Press.
13. Mayberry, R. I. (2007). When timing is everything: Age of first-language acquisition effects on second-language learning. *Applied Psycholinguistics*, 28(3), 537-549.
14. Easterbrooks, S. R., & Baker, S. K. (2002). *Language learning in children who are deaf and hard of hearing: Multiple pathways*. Boston, MA: Allyn & Bacon.
15. Yoshinaga-Itano, C. (2006). Early identification, communication modality, and the development of speech and spoken language skills: Patterns and considerations. In P. E. Spencer, & M. Marschark (Eds.), *Advances in the spoken language development of deaf and hard-of-hearing children* (pp. 298-327). New York, NY: Oxford University Press.
16. Yoshinaga-Itano, C., Sedey, A., & Uhler, K. (2008). *Speech piggybacks onto sign: Fast-mapping from sign to speech*. Paper presented at the conference of Educational Administrators of Schools and Programs, Boulder, CO.
17. Goldin-Meadow, S., & Mayberry, R. I. (2001). How do profoundly deaf children learn to read? *Learning Disabilities Research & Practice*, 16(4), 222-229.
18. Nover, S. M., Andrews, J. F. (1998). *Critical pedagogy in deaf education: Bilingual methodology and staff development: Year 1 (1997-1998)*. Santa Fe, NM: New Mexico School for the Deaf.
19. Grosjean, F. (2010). Bilingualism, biculturalism, and deafness. *International Journal of Bilingual Education and Bilingualism*, 13(2), 133-145.
20. Nover, S. M., Christensen, K. M., & Cheng, L. L. (1998). Development of ASL and English competence for learners who are deaf. *Topics in Language Disorders*, 18(4), 61-72.
21. Swanwick, R. (2001). The demands of a sign bilingual context for teachers and learners: An observation of language use and learning experiences. *Deafness & Education International*, 3(2), 62-79.
22. Nover, S., Andrews, J., Baker, S., Everhart, V., & Bradford, M. (2002). *Critical pedagogy in deaf education: Bilingual methodology and staff development: Year 5 (2001-2002)*. Santa Fe, NM: New Mexico School for the Deaf.
23. Gárate, M. (2007). *A case study of an in-service professional development model on bilingual deaf education: Changes in teachers' stated beliefs and classroom practices*. (Unpublished doctoral dissertation). Gallaudet University, Washington, DC.
24. Gárate, M. (2011). Educating children with cochlear implants in an ASL/English bilingual classroom. In R. Paludneviene & I. W. Leigh (Eds.), *Cochlear implants: Evolving perspectives* (pp. 206-228). Washington, DC: Gallaudet University Press.
25. Swanwick, R., & Tsverik, I. (2007). The role of sign language for deaf children with cochlear implants: Good practices in sign bilingual settings. *Deafness and Education International*, 9(4), 214-231.
26. Jacobson, R. (1990). Allocating two languages as a key feature of a bilingual methodology. In R. Jacobson &

C. Faltis (Eds.), *Language distribution issues in bilingual schooling* (pp. 3-17). Philadelphia, PA: Multilingual Matters.

27. Freeman, Y. S., & Freeman, D. E. (2005). Preview, view, review: Giving multilingual learners access to the curriculum. In L. Hoyt (Ed.) *Spotlight on comprehension: Building a literacy of thoughtfulness* (pp. 453-457). Portsmouth, NH: Heinemann.

28. Simms, L., Andrews, J., & Smith, A. (2005). A balanced approach to literacy instruction for deaf signing students. *Balanced Reading Instruction*, 12, 39-53.

29. Li, Y. (2005). *The effects of the bilingual strategy—preview, view, review—on the comprehension of science concepts by deaf ASL/English and hearing Mexican-American Spanish/English bilingual students* (Unpublished doctoral dissertation). Lamar University, Beaumont, TX.

30. Gallimore, L. (2000). *Teachers' stories: Teaching American Sign Language and English literacy*. (Unpublished doctoral dissertation). University of Arizona, Tucson, AZ.

31. Evans, C. J. (2004). Literacy development in deaf students: Case studies in bilingual teaching and learning. *American Annals of the Deaf*, 149(1), 17-27.

32. Nussbaum, D. B., & Scott, S. M. (2011). The cochlear implant education center: Perspectives on effective educational practices. In R. Paludneviene & I. W. Leigh (Eds.), *Cochlear implants: Evolving perspectives* (pp. 175-205). Washington, DC: Gallaudet University Press.

33. Golos, D. (2010). Deaf children's engagement in an educational video in American Sign Language. *American Annals of the Deaf*, 155(3), 360-368.

34. Cannon, J. E., Frederick, L. D., & Easterbrooks, S. R. (2010). Vocabulary instruction through books read in American Sign Language for English-language learners with hearing loss. *Communication Disorders Quarterly*, 31(2), 98-112.

35. Hanson, V. L., Padden, C. A. (1989). Interactive video for bilingual ASL/English instruction of deaf children. *American Annals of the Deaf*, 134(3), 209-213.

36. Bailes, C. (2001). Integrative ASL-English language arts: Bridging paths to literacy. *Sign Language Studies*, 1(2), 147-174.

37. Andrews, J. F., & Rusher, M. (2010). Codeswitching techniques: Evidence-based instructional practices for the ASL/English bilingual classroom. *American Annals of the Deaf*, 155(4), 407-424.

38. Humphries, T., & MacDougall, F. (2000). "Chaining" and other links: Making connections between American Sign Language and English in two types of school settings. *Visual Anthropology Review*, 15(2), 84-94.

39. Kelly, A. (1995). Fingerspelling interaction: A set of deaf parents and their deaf daughter. In C. Lucas (Ed.), *Sociolinguistics in Deaf communities* (pp. 62-73). Washington, DC: Gallaudet University Press.

40. Padden, C., & Ramsey, C. (1998). Reading ability in

signing deaf children. *Topics in Language Disorders*, 18(4), 30-46.

41. Haptonstall-Nykaza, T. S., & Schick, B. (2007). The transition from fingerspelling to English print: Facilitating English decoding. *Journal of Deaf Studies and Deaf Education*, 12(2), 172-183.

42. Visual Language and Visual Learning Science of Learning Center. (2010, July). *The Importance of Fingerspelling for Reading* (Research Brief No. 1). Washington, DC: Sharon Baker.

43. Svartholm, K. (2010). Bilingual education for deaf children in Sweden. *International Journal of Bilingual Education and Bilingualism*, 13(2), 159-174.

44. Koutsoubou, M., Herman, R., & Woll, B. (2007). Does language input matter in bilingual writing? Translation versus direct composition in deaf school students' written stories. *The International Journal of Bilingual Education and Bilingualism*, 10(2), 127-151.

45. Mendéndez, B. (2010). Cross-modal bilingualism: Language contact as evidence of linguistic transfer in sign bilingual education. *Journal of Bilingual Education and Bilingualism*, 13(2), 201-223.

46. Strong, M. (1995). A review of bilingual/bicultural programs for Deaf children in North America. *American Annals of the Deaf*, 140(2), 84-90.

47. LaSasso, C. & Lollis, J. (2003). Survey of residential and day schools for Deaf students in the United States that identify themselves as bilingual-bicultural programs. *Journal of Deaf Studies and Deaf Education*, 8(1), 79-91.

48. Andrews, J.F., Ferguson, C., Roberts, S. Hodges, P. (1997). What's up Billy Jo? Deaf children and bilingual-bicultural instruction in East-Central Texas. *American Annals of the Deaf*, 142(1), 16-25.

49. DeLana, M., Gentry, M. A., & Andrews, J. (2007). The efficacy of ASL/English bilingual education: Considering public schools. *American Annals of the Deaf*, 152(1), 73-87.

50. Gárate, M. (2008). Bilingual deaf education: Changes in teacher's stated beliefs and classroom practices. *Rivista Di Sicolinguistica Applicata* 3, 64-73.

51. Gárate, M. (2012). Deaf teachers' beliefs about bilingual deaf education. *Deaf Studies Digital Journal*, 3. Retrieved from dsdj.gallaudet.edu

---

## Credits

---

**Writer:** Maribel Garate, Ph.D.

**Editor:** Kristen Harmon, Ph.D.

**Consultant:** Diane Clark, Ph.D.

**Design:** Tara Congdon, Jacob Shamberg, Erica Wilkins

**Education and Research Translation Manager:** Melissa Herzig, Ed.D.



### Cite this brief

Visual Language and Visual Learning Science of Learning Center.  
(2012, June). *ASL/English Bilingual Education*. (Research Brief No.  
8). Washington, DC: Maribel Gárate.



VISUAL LANGUAGE  
AND VISUAL LEARNING