



# ***Bilingual Basics***

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## ARTICLES AND INFORMATION

### **TOWARD UNIVERSAL DESIGN IN READING INSTRUCTION**

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## **TOWARD UNIVERSAL DESIGN IN READING INSTRUCTION**

In terms of reading instruction, the education of deaf students is both complex and highly misunderstood. Though deaf students may be fluent in American Sign Language (ASL) and meet the linguistic prerequisite for reading, the lack of a viable process to learn and master English literacy for these students is a troubling component of American education. Goldin-Meadow and Mayberry (2001) made it clear that knowing language is not enough for learning how to read for hearing students. They need to learn how to map the language they know into print. For this reason, Goldin-Meadow and Mayberry proposed that deaf students learn how to map between signed language and print for the purpose of learning English as their written language. The question is: *What are the techniques that will enable deaf students to map print onto sign and learn to read English at the same time?*

Chamberlain and Mayberry (2000) acknowledged the limitations of the prevailing bilingual education framework when applied to deaf readers. More specifically, they referred to the Linguistic Interdependence Theory (e.g., Cummins, 1989, 1991; Cummins & Swain, 1986). It has been proposed that deaf students learning to read in English would benefit by learning to read using ASL as an L1, and transferring to or enhancing the learning of English as the L2 (Hoffmeister, 2000; Strong & Prinz, 2000). The empirical studies reviewed by Chamberlain and Mayberry demonstrate that ASL-proficient students performed better in English literacy than did those who lack ASL proficiency, and this has been attributed to the interdependence phenomenon. However, Singleton, Morgan, DiGello, Wiles, and Rivers (2004) noted that even fluent signing deaf students do not perform as well as do hearing L2 learners with English writing tasks. An explicit process to connect the two languages may be required to achieve optimal success. According to Chamberlain and Mayberry, the bilingual education dispute

concerning deaf students centers on *how* these students should achieve English literacy as follows:

Mayer and Wells (1996) provided a thorough and strong critique of the use of the model [Linguistic Interdependence Theory] for this population [deaf students]. The main thrust of their critique is that reading cannot be learned directly through the use of ASL without an intermediate link because of the “nonequivalence” between ASL and English. That is, they stressed the fact that there is no written form of ASL and [deaf] children generally lack access to oral English. (Chamberlain & Mayberry, 2000, p. 241)

“Nonequivalence” between ASL and English is a fact; however, the most appealing part is the noted need for an intermediate link between ASL and written English. The question raised here is: *What is an intermediate link for deaf students?* We propose the use of *ASL gloss* to fill this void (see Singleton, Supalla, Litchfield, & Schley, 1998, for further discussion on the significance of ASL gloss and bilingualism concerning deaf students). With the priority being to create English literate deaf students, Mayer and Wells (1996) made it clear that even if ASL had a full-blown writing system, it would not suffice. The gap between written ASL and English would still be too wide. Bilingual students who can hear continue to have an advantage in being able to access spoken English as an L2 in order to make the transition to the print form. They learn to read in L1 (e.g., oral to print in Spanish) and do the same in English (i.e., oral to print; Paul, 1996; 1998). Thus for deaf students, ASL gloss serves as a “hybrid” of ASL and English allowing the needed *cross-linguistic* transition from ASL to written English (Cripps & Supalla, 2004; Supalla, 2003). Figure 1 illustrates the working relationship between ASL and written English for deaf students.

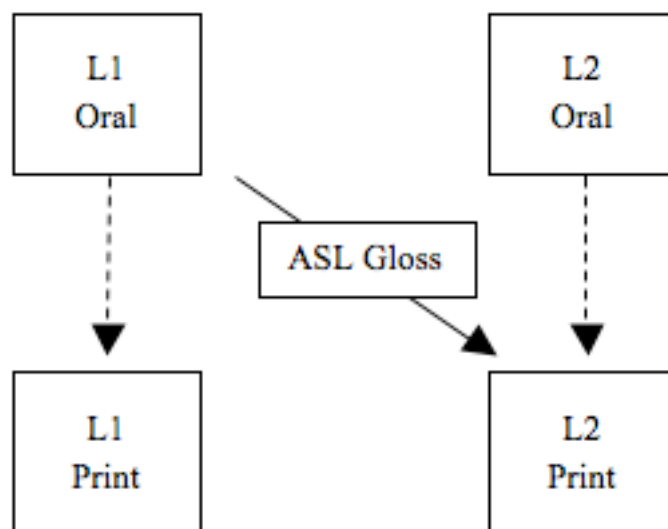


Figure 1. Role of ASL Gloss for Teaching Reading to Deaf Students

### **ASL GLOSS AS AN INTERMEDIARY WRITING SYSTEM**

The question remains: *What is ASL gloss and where did it originate?*

Interestingly, ASL gloss has been largely confined to use among students who can hear, especially those who learn ASL as a foreign/second language in colleges and universities. Given that ASL does not have a conventional writing system, ASL instructors still desire a permanent display of the language. They resort to using gloss text by rearranging English words or roots to conform to ASL grammar. This includes the use of additional conventions to help ensure that ASL is represented adequately on paper (e.g., underline used to show a topicalized sentence). In other words, ASL gloss involves a manipulation of the English text to represent the signed language. Buisson (2007) has provided some of the empirical evidence on how hearing students benefit in learning ASL via ASL gloss. For ASL instructors, using ASL gloss allows them to read and model language for the students in the classroom (see Humphries & Padden, 2004, Madsen, 1982, Smith, Lentz, & Mikos, 2008, and Zinza, 2006, for the use of gloss texts in ASL textbooks). Using a selected version of gloss, the sentence example translated

from English below illustrates a set of conventions representing the grammatical features of ASL:

DOG NOW CHASE>IX=3 CAT.

(The dog is chasing the cat)

The example above depicts four English words all capitalized to represent the four signs produced as an equivalent of the English sentence composed of the six words written in parentheses. Structurally, no definite article is used in the ASL gloss sentence, which is correct for the signed language. The ASL gloss sentence also indicates a rough equivalence of the present progressive tense in English, with the insertion of NOW as a separate word (or “time sign”) before the verb. In addition, the ASL verb CHASE undergoes a third-person object agreement inflection (i.e., the movement of the verb is manipulated to agree with the location of the cat in the signing space) with the attachment of the gloss convention >IX=3 to the verb representing inflection in the sentence. This glossing is best described as a result of interlinear translation. A variety of ASL gloss sentences and compositions are done in ASL textbooks.

A unique benefit of ASL gloss is that it retains its readability with English text. Thus a novice signer (who hears and speaks English) can read and comprehend the ASL gloss sentence example fairly well. This person can also observe that the ASL gloss sentence demonstrates morpho-syntactic differences. Obviously, assistance from an ASL instructor is necessary if the novice signer is to understand the differences fully. Shared orthography and spelling between gloss text and regular text create a sense of transparency between languages. Unlike conventional texts (Spanish or Arabic with English), students can see what is the same, similar, and different between the languages.

While ASL gloss is used in ASL programs throughout the United States, the intermediary writing system is overlooked in the field of deaf education. Why? Disability expertise plays a distracting role as the traditional bilingual education framework assumes intact hearing capacity, on the part of students, for achieving and mastering English literacy. ASL gloss falls through the cracks, so to speak. Supporting this is Mayer and Akamatsu's (2003) literature review on the attempts to make "bilingual education" work for deaf students. The deaf education experts mention the use of ASL gloss more than once, but there has yet to be significance imparted on an intermediary writing system. The overriding concern that these experts have is the incompatibility of deaf students with the bilingual education framework. Moreover, the detailed description of the ASL gloss approach by Supalla et al. (2001) was only seen as a grammar-translation or contrastive type of language instruction and nothing more. We respond that the prospects for effective reading instruction practices diminish when the role of ASL for reading development with English is sidetracked (see Supalla & Cripps, 2008, for further discussion on the concept of linguistic accessibility and signed languages). Our mindset must then shift from the narrow and historical preoccupation with spoken language in the deaf education curriculum to one that encompasses a more universal design that will assist deaf students, as well as those who can hear.

## **POTENTIAL BENEFITS OF THE ASL GLOSS APPROACH FOR DEAF STUDENTS**

To be clear, ASL gloss is proposed to support reading development of deaf students. As noted earlier, the transparency of ASL gloss with hearing students (who have already developed reading skills) is expected to translate to more readable English text for deaf students (when they have an opportunity to read gloss text, i.e., transfer of CHASE to chase). With the interlinear translation of leveled English books and children's literature from kindergarten through third



In the ASL equivalent for CAT, the grapheme in the furthest left slot refers to the hand shape seen in Figure 2 below, the  $\subset$  grapheme refers to the location of where the sign is produced (i.e., on the cheek), and the last graphemes refer to the movements made (i.e.,  $\&$  = circular and  $\text{H}$  = repeated). Thus an important support component of the ASL gloss approach is the use of the RB, which functions similar to a bilingual dictionary. The ASL-phabet graphemes function similarly to letters in spoken language alphabets. They allow deaf students to master 'letter and sound relationships' and facilitate the decoding process between ASL gloss and English text.



Figure 2. "Oral" Form of ASL Sign Parameters Subject to Transcription with the ASL-phabet

### *Comparative Analysis*

To complete the transition from ASL to written English, deaf students must learn English structures as informed through comparative analysis of gloss and regular texts. The ASL gloss reading materials allow teachers to target English structures that differ somewhat or entirely from what the students know linguistically. The materials present grade-level information from less to more complex comparisons. We predict that these comparisons will create a time-based

distribution of English structures to be learned that are comparable to ASL, along with those that are independent of ASL structures (see Supalla & Blackburn, 2003, for details of the innovative reading program and Blackburn, Wix, McKee, & Supalla, 2000, for the unpacking of English language arts standards for use with deaf students).

## **CONCLUSION**

Insights and emerging empirical evidence on how deaf students learn to read based on the ASL gloss approach can be reviewed in Cripps (2008; Cripps & Supalla, 2004). Also see Di Perri (2004) for evidence of phonological awareness that deaf individuals possess in ASL, which is critical for learning to read through the ASL-phabet. More work in the area of longitudinal data collection and normatively rare database is evidently needed if the ASL gloss approach is to become a mainstay of deaf education. If the universal design in theory and practice for reading instruction is to be realized, the prevalence of spoken language biases cannot continue and cross-linguistic connections need to be fully defined through research and development. As part of creating this common advocacy, researchers and scholars may want to explore how print can become a primary source in learning a new language for hearing students who have not yet heard English or have limited knowledge of the language. The sketch presented here of the ASL gloss approach provides ideas for the alignment of the curriculum to achieve the goal of English literacy for all students in American schools.

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