

Bilingual-Bicultural Models of Literacy Education for Deaf Students: Considering the Claims

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As Carolyn Ewoldt (1996) points out, “[M]uch has been written of late about the viability of a bilingual focus in deaf education.” While these writings are necessary to the ongoing pedagogical dialogue in the field, much of the rhetoric suffers because, rather than truly adopting a “holistic perspective,” arguments and positions focus only on selected aspects of the relevant theoretical and research information. If proponents of bilingual education for deaf children truly rely on “research on the benefits of native sign language and from theoretical and research support coming from other disciplines” (Ewoldt, 1996, p. 5) to support their claims, then these research and theoretical supports must be examined as comprehensively, and as holistically, as possible. Weaving together only a few threads of theory and research does not create the fabric for a pedagogical position that can withstand close scrutiny and analysis.

In this article, we will touch on some of the major claims made in explications of bilingual models of literacy education for deaf students (Baker, 1997; Livingston, 1997; Mashie, 1995; Mason & Ewoldt, 1996). Our goal is to broaden the scope of the discussion on some of the major arguments and to encourage an expanded dialogue in this ongoing debate. It is not our aim to argue against the concept of bilingual education for deaf students nor to advocate the exclusion of native sign languages from the classroom. Rather, we support the concept of a bilingual education for deaf students with native sign languages playing a key role; however, we contend that the model as it is currently conceived requires further scrutiny and analysis.

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The Claim for Linguistic Interdependence

The key theoretical underpinning for most bilingual-bicultural models of deaf education is Cummins’s (1989b, 1991a) linguistic interdependence model, which argues for the existence of a common proficiency underlying all languages. The argument in deaf education, which follows from this model, is that deaf children who have a solid L1 foundation in a native sign language can use this language to buttress their learning of the majority language in its written form, without exposure to the majority language through either speech or a manually coded system. Mayer and Wells (1996) argue that this contention is based on a false analogy as the conditions assumed by the linguistic interdependence theory do not hold true, since the situation of the deaf learner of L2 literacy does not meet the conditions assumed by the linguistic interdependence model.

Mayer and Wells are not questioning the validity of Cummins’s theoretical model, but rather its applicability in linguistic contexts in which the two languages under consideration are the written form of an oral language and a native sign language. Cummins (1989a) writes that linguistic interdependence “makes possible the transfer of cognitive/academic or literacy related skills across languages” (p. 44). He does not make a claim for wholesale transfer of all skills across all languages. Rather, he is very clear to make a distinction between cognitive/academic and literacy-related skills.

Although research in the context of bilingual deaf

education is still limited, numerous studies from other bilingual situations are available for consideration. What becomes clear from a consideration of this research is that linguistic interdependence certainly exists, but in very specific and defined ways. There is no evidence of a correlation between oral ability in the first language and the subsequent ability to read and write in a second language (for a review of the research see Cummins, 1991a, 1991b; Cummins & Swain, 1986). However, strong positive correlations have been identified between the ability to read and write in the L1 and to master these same skills in the L2 (Canale, Frenette, & Belanger, 1987; Cumming, 1989; Treger & Wong, 1984). But even this link becomes tenuous when the orthographies of the two languages are dissimilar (Cummins et al., 1984; Genesee, 1979). In light of this research, the ramifications for the deaf context become clear. If, in other bilingual contexts, there is no correlation between oral ability in L1 and the ability to read and write in the L2, why would we expect to see a linguistic transfer between the ability to sign in L1 and read and write in L2?

The issue is further confounded when the strong positive correlations between reading and writing abilities in the first and second languages are taken into account. The evidence for this positive transfer of literacy-related skills is well documented and has provided the support for bilingual programs that encourage the development of higher levels of literacy in the first language (Cummins & Danesi, 1990). But as native sign languages do not have widely accepted written forms, deaf students cannot acquire these literacy skills in their first language to transfer to the written form of a second spoken language.

It seems therefore that there is little linguistic interdependence between a native sign language and the written form of a spoken language. This does not negate the fact that learning a native sign language can develop the cognitive power that supports broad conceptual and cognitive transfers across languages, and it would appear that a native sign language (such as Auslan or American Sign Language [ASL]) is both necessary and sufficient for the development of a first language that can be used as a central component in the mediation of experience with profoundly deaf children. But it is not a language that directly mediates the devel-

opment of text-based literacy in the majority spoken language. Therefore, although Ewoldt (1996) correctly argues that "the first language can provide a strong basis for learning other languages," it is important to tease out the nature of this "strong basis." As has been pointed out, the correlation is not as simple, straightforward, and absolute as proponents of bilingual-bicultural education often claim it to be.

The Claim for the Use of Native Sign Languages

Fischer (1998) distinguished between native sign languages, natural sign systems (naturally evolved systems that deaf people use to communicate with hearing people), and artificial sign systems (invented codes for spoken language). Both natural and artificial sign systems assume that English can be represented manually and comprehended and acquired in that form and be useable for literacy acquisition. Much ado has been made about the sign systems that were developed for pedagogical reasons. Some systems were truly systematic, in that they had specific criteria for representing English in signing (e.g., SEE II, Signed English). However, the very specificity of the criteria and the widespread use of invented signs often rendered them difficult to use.

Other systems adopted a more laissez-faire approach (e.g., English word order with unspecified ASL markers), which ironically had the effect of becoming more comprehensible and being more widely used, especially among deaf and hearing signers. In a comprehensive review of bimodal communication, Maxwell (1990) disputed the claim that simultaneous speech and sign were necessarily ineffective just because this more relaxed version of English-based signing was used. Indeed, she and others (e.g., Brasel & Quigley, 1977; Lucas, 1989; Maxwell & Bernstein, 1985; Newell, Stinson, Castle, Mallery-Ruganis, & Holcomb, 1990) have demonstrated that such signing is used within the deaf community and is differentiable from ASL. On the basis of a similar literature review, Stewart (1993) concluded that "Sim Com can be an effective medium for communication and requires a combination of linguistic features of both English and ASL" (p. 333).

Criticisms that have been levied around virtually all

the signing systems have assumed an ideal form of isomorphic simultaneous representation of spoken English and the manual code, which is rarely, if ever, achieved (Baker, 1978; Hyde & Power, 1991; Marmor & Petitto, 1979; Maxwell & Bernstein, 1985; Mayer & Lowenbraun, 1990; Stewart, Akamatsu, & Bonkowski, 1990). Furthermore, some of the invented sign systems have been the subject of much derision in the deaf community, largely because their lack of spatiality and the breaking of ASL phonological rules has not rendered them viable for face-to-face communication. These criticisms led many to adopt the stance that a natural sign language, by virtue of being both naturally developed and a complete language, is a more viable tool than a sign system for establishing an L1 base.

It would seem important to consider the research findings from studies of teachers and students who use various forms of sign systems. There is research evidence that both natural and artificial sign systems can provide sufficient linguistic information for deaf individuals to establish an English language base and to support engagement in literacy activities at the morpho-syntactic level (Akamatsu & Stewart, 1998; Luetke-Stahlman, 1988; Maxwell & Bernstein, 1985; Mayer & Akamatsu, 1996; Stewart, Akamatsu, & Becker, 1995; Wodlinger-Cohen, 1991), although the lexical and phonological levels are still problematic.

Natural sign systems can be used to represent a spoken language in a way that is visually accessible (Mallery-Ruganis & Fischer, 1991; Maxwell, Bernstein, & Maer, 1991), and the use of natural sign systems appears to be subject to the same sociological factors that condition other bilingual language situations (Lucas & Valli, 1992; Maxwell & Doyle, 1996; Stewart, Akamatsu, & Bonkowski, 1990). That is, people unconsciously change their signing to fit the communicative needs of the moment. In fact, natural sign systems are in common use throughout the deaf community, when deaf people interact with either hearing or deaf interlocutors (Lucas & Valli, 1992). What is more, certain specific lexical items from the sign systems have been adopted into native sign language and are also used in natural sign systems. It is interesting to note that some of these lexical items, especially initialized words, bear a resemblance (at least in ASL) to the written word.

The linguistic interdependence theory as it was originally conceived only took into account two languages that shared the spoken modality and also had written forms. It did not account for signed languages, but neither did it rule out its applicability to signing or the possibility that cognitive and linguistic transfer between two similar forms of signed language would also occur. Research evidence shows that the more alike within the same modality two languages are, the more transfer is likely to occur, whether in the spoken or written modality.

Natural sign systems, because of their linear mapping with spoken language, as well as their spatial mapping with signed language, may provide a bridge between a native sign language and an English-based natural sign system to build the underpinnings in English (L2) that are necessary for literacy. In a review of the effects of English-based signing, Stewart (1993) suggests that the “psycholinguistic information contained in ASL and in manual codes for English may have more in common than previously thought” (p. 334). Artificial sign systems may also have a role specifically in literacy development (Fischer, 1998). Therefore, it would seem premature to confine the signing modality solely to native sign language in a bilingual model of deaf education.

The Claim for a Written Language as L2

It is true that written language is more than “speech written down” (Vygotsky, 1987). By definition, written language lacks the auditory features and visual-gestural aspects of spoken discourse, and in the composing process all writers struggle to capture both the propositional content and the illocutionary force of the spoken word in the written text (Olson, 1977, 1993). In written discourse, communication must occur in the absence of a physically present interlocutor, demanding a precision of expression and an expansion and elaboration of thought unnecessary in face-to-face communication (Halliday, 1989). These are some of the reasons why learning to read and to write is not a simple, straightforward matter even for hearing children. As Kress (1982) comments, “Considering how painlessly children learn to talk, the difficulties they face in learning to write are quite pronounced. Indeed, some children never learn

to write at all, and many fall far short of full proficiency in the task of writing" (p. ix).

Proponents of bilingual-bicultural models of deaf education often use this argument to make the claim that, because spoken and written language differ, deaf children can bypass the spoken form of the written language and still learn to read and to write. But to make this claim is to ignore the large body of research and theoretical discussion that explores how spoken and written language are interdependent. Vygotsky (1978) writes that "understanding of written language is first effected through spoken language, but gradually this path is curtailed and spoken language disappears as the intermediate link (p. 118)."

This interdependence is most evident when considering how beginning writers go about the business of composing a written text. Hearing children use a strategy of verbalizing their thoughts piecemeal and then attempting to write them down. Teachers working with these students often "scaffold" this learning by advising the students to "write down what they say." Graves (1983) provides vignettes of students like Dana, who as a six-year-old engaged in the writing process, used speech often and for a broad range of functions such as "sounding out letters, saying words before they were written and after writing them, rereading, and making procedural statements and comments to other children" (p. 163). Dana, it could be argued, was "talking his way into text."

Children learn the grammatical and textual rules of spoken language first and rely and draw on these as they first learn to write. Kress (1994) points out that "children's early writing shows many of the features of the grammar of speech, or features which would derive from the child's knowledge of speaking" (p. 36). Kroll (1981) argues that the dominant relationship between speaking and writing changes as one develops as a writer and this developmental factor has particular relevance for education. He proposes a model with four principal relationships: separate, consolidated, differentiated, and integrated. It is in the second, consolidation phase when "a child's written utterances rely heavily on his or her spoken language repertoire. Writing and speaking are relatively integrated and writing is very nearly talk written down" (p. 39).

In this way spoken language serves as a bridge to written text. A native sign language does not build a comparable bridge for deaf students as there is no one-to-one correspondence between signed and written utterance. While signing about a topic will undoubtedly assist the student in elaborating and expanding ideas, it does not, at the actual moment of composing, assist the student in making correct lexical, morphological, and syntactic choices. These choices for hearing writers are shaped and determined to a large extent by their knowledge of the spoken language that gave root to the written form (Biber, 1986). While writing is certainly much more than spoken language on paper, it is spoken language that offers the most expedient route to acquiring composing facility in the first place.

In discussions of this point, the argument is often made that in other bilingual situations in the world two different languages are used: one for face-to-face communication and the other for reading and writing (Dahl, 1994). This is seen as providing support for the notion that it is possible to have educational environments in which a native sign language is used as the sole language for instruction and face-to-face communication, and the written form of the majority spoken language is used for reading and writing. And, further, it is argued that the learning of this written language will be affected through written text, not through speech or manually coded versions of the spoken language.

But this does not parallel the context of other bilinguals. There is no inherent barrier or imposed "ban" placed on the use of the spoken form of the target written language in order to teach it. While the primary goal may be to learn to read and write the L2 rather than to speak it, it is unusual (if not impossible) that hearing learners do not have exposure to its spoken form. Typically these learners have access to and some facility in both the spoken and written forms of the L2, even though they may rely on the L2 for reading and writing since their own L1 does not have a written form.

To support the "written language as L2" notion, Ewoldt (1996) argues that Cantonese speakers learn to read Mandarin characters (p. 8). However, this example does not support the argument, as all Mandarin and

Cantonese speakers use Modern Standard Chinese script, not Mandarin, for reading and writing. The orthographic system is neutral with respect to both Mandarin and Cantonese as spoken dialects of the Chinese language and is related to both dialects in systematic though nonalphabetic ways. This then is not a case of speaking one language and writing another. Further, in 1958 pinyin zimu (pinyin phonetics) was developed. This is a Romanized script that phonetically transcribes Modern Standard Chinese and is used in schools to teach reading. In so doing “the acquisition of logographies is facilitated by a companion script that permits phonologically mediated access to the lexicon” (Form & Share, 1983, p. 113). This seems to provide further support for the claim that there is an important connection between spoken and written language. To claim that this connection, which plays a pivotal role in the literacy development of other language learners, does not apply or is irrelevant to the situation of the deaf learner seems short-sighted.

We are not advocating for a return to a “speech-focused” approach to education but rather suggesting that it is not possible for any second language learner, including the deaf child, to completely “bypass” the speaking-writing connection in the literacy learning process. A more productive and fruitful approach would be to consider alternate pathways or routes for establishing this connection for deaf learners of English, a connection that we would argue cannot be ignored.

The Claim for Whole-Language, “Top-Down” Models of Literacy Education

Mason and Ewoldt (1996) argue for a whole language/bilingual program that focuses on the construction of meaning through relevant, enjoyable, natural communication (p. 294). Ewoldt (1996) describes a top-down model as one that “places emphasis on the construction of meaning for text, with the understanding of grammar and individual words as outcomes of this meaning based engagement” (p. 7). She goes further and claims that lacking knowledge of sentence form and print characteristics need not interfere with the ability to make meaning from text. In a similar vein, Livingston

(1997) argues for an “uncommonsense theory, much like a whole language theory,” which would support the view that language acquisition and learning in general are tacit, holistic, and top-down processes (p. 13–18).

Although Ewoldt and others argue against contrived models of reading and writing experiences, “there is still no research evidence that immersion in rich experience is sufficient for all children and not all instruction is contrived, isolated and inconsistent with development” (Cazden, 1992, p. 12). Preparedness for literacy varies from child to child, and effective pedagogy must take into account these individual differences and must reflect a solid understanding of the knowledge and processes involved in learning to read and to write (Adams, 1990). Teachers across grade levels must understand the course of literacy development and the role explicit instruction plays along the way.

Certainly few would deny that language learning should be holistic and interactive and that “children need to perceive it as functional for them in relation to activities they find both challenging and personally meaningful” (Wells, 1994, p. 82). But to focus only on the top-down aspects of the language learning process ignores the persuasiveness of claims for the critical role played by “bottom-up” skills (Gray and Hosie, 1996, p. 219). For example, while there is certainly more to learning to read than phonics, the extent to which phonics needs to be made a focus of attention varies from learner to learner, and, depending on their prior experiences, some will need deliberately given, explicit help while others will pick up this working knowledge in passing.

In a research review concerning students who are struggling to learn to read, Aaron (1997) concludes that “whatever the form in which instruction is delivered, it has to be noted that word recognition is a precursor to reading comprehension. This means that for a child who has difficulties in both word recognition and comprehension, improvement of the the former skill should become the priority” (p. 489). There is no reason to expect, or research evidence to support, that deaf learners can forego the bottom-up aspects of the literacy acquisition process. In fact a substantial body of research literature makes the case that it is exactly these bottom-up aspects that deaf students most often

struggle with (see Kelly, 1995; Paul, 1998). Svartholm (1994), herself an advocate for bilingual education for deaf children, questions the efficacy of natural, whole-language approaches to the teaching of English, in which the directed teaching of language principles is “banished” from the classroom. She argues that developing literacy in a second language is no doubt a difficult task for any child, but for a deaf child this task seems to be still more difficult since learning to read and to write the language is entirely identical with learning the language itself.

Ignoring the bottom-up skills simply because deaf students have the greatest difficulty with them avoids dealing with the issue. The cognitive demands of becoming literate call for a pedagogy that emphasizes the integration of top-down and bottom-up skills, and in our view, to reduce pedagogy to a whole-language, top-down versus bottom-up debate not only oversimplifies the issue, but misrepresents it, putting the implementation of the valuable components of each at risk.

Conclusion

This critical examination of some of the most frequent claims made by supporters of bilingual-bicultural models of literacy education for deaf students questions the viability of these claims as a sufficient foundation and basis for justifying this pedagogical argument. In raising this question our goal is not to argue that these claims are “right” or “wrong.” This would contribute little to an already prolonged debate and would pander to the fallacious notion that there is one “best” and only way to educate deaf children. Nor should this criticism be seen as the basis for making a general argument against bilingual education for deaf students. This is a point we made at the outset.

However, if this approach to educating deaf children is to be seen as appropriate for larger numbers of students, its tenets and theoretical foundations must be able to withstand close examination, and its proponents cannot conveniently ignore the current theory, knowledge, and research data that do not “fit” the model. The challenge for all of us is to consider the “hard” questions and to grapple with making sense of the problematic aspects of a bilingual model of deaf education. Some of these concerns, which are shared by others in the field (Paul & Quigley, 1987; Schirmer, 1994;

Stewart, 1993), have been raised in the discussion presented here: What is the nature of linguistic interdependence when the first language is a signed language and the second is the written form of a spoken language? Is it reasonable to expect that deaf students can learn English solely through access to its print form? What roles can natural and artificial sign systems play in building bridges from native sign language to literacy? Which models of teaching and learning would be most effective for deaf learners of English? Why would it be “best practice” to limit our pedagogy to a single approach?

Ewoldt (1996), quoting Mashie, writes that “true change won’t occur until we work toward a theoretical model that capitalizes on what we know about language/child development” (p. 8). We would argue that true change will occur only when we take into account *all* of what we know about language and child development. In a critique of the integration debate, Weber (1994) lamented that “a sad but unavoidable truth of modern education is that many new, sound ideas are suffocated by the excesses of their advocates’ claims” (p. 1). We would urge all those who support the philosophy of bilingual education for deaf students to step back, reconsider, and reflect lest this “new and sound idea” be smothered by the weight of its own claims.

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