Beyond Deaf Education: Manually Signed English as a Kinesthetic Tool for Hearing Language Learners

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The method in which to best educate deaf and hard of hearing (HOH) students has been a debated topic for over a century. In the later part of the 19th century, Oralists believed that the education of deaf and HOH students should only be conducted by oral means as a way for the Deaf to assimilate into mainstream society, stressing lip-reading (now more commonly called speechreading) and speech therapy. At the Milan Conference of 1880, they pushed aside the ideas of the Manualist, who believed that sign language should be used instead (McClue, 2013). The success of Oralism was so great that whereas almost no deaf schools in the United States taught exclusively using oral methods in 1860, by 1918, 80% of deaf students were instructed completely without sign language. Oralism continued to be the dominate philosophy until the late-1970s (Baynton, 1996).

The decline of Oralism coincided with the recognition of American Sign Language (ASL) as the natural language for deaf people in the United States and the emergence of Deaf Culture. In 1960, William Stokoe conducted a linguistic study of ASL and published his groundbreaking paper proving that ASL was a full, legitimate language and not a pantomimed, inferior version of English. These findings empowered deaf communities in the United States, and in the rest of the world, and helped give rise to the Deaf Pride movements of the 1970s and 1980s (Humphries, as cited in Mathur and Napoli).

The next major philosophical view in deaf education was Total Communication (TC). David Denton developed TC in 1967 at the Maryland School for the deaf and it reached the height of its popularity in the late-1970s and 1980s. TC stood as the middle ground between oral-only education and sign-only education, incorporating both as needed in different contexts. "The intention of this philosophy is to provide a deaf or hard of hearing child with any and all strategies necessary to support his or her development of communication and language" (Gallaudet University, n.d.). This included not only American Sign Language (ASL) and spoken language, but gestures and Manually Coded English (MCE) systems like finger spelling and Signing Exact English, and Cued Speech.

Currently, the favored philosophical model is Bilingual-Bicultural education (BiBi). BiBi is based on the Linguistics Interdependence Hypothesis first proposed by Jim Cummings in 1979: If a language learner is proficient in his or her first language (L1), then with adequate exposure and motivation, proficiency may be transferred to the second language (L2) (Cummings, 2005). While deaf students do not fit the traditional idea that many may have of who English as a Second Language (ESL) students are because they may not come from a non-English speaking country or may not have non-English speaking parents, it must be remembered that for many deaf people, signing is their first language, and English their second, especially for those who were born deaf. BiBi recognizes that if students have high proficiency in ASL (L1), then it may be easier for them to learn English (L2). Strong emphasis is placed on ASL, learning about deaf culture and participating in the deaf community. ASL is the language of instruction for all subjects, with English used in its printed form (Deaf Culture Centre, n.d.). Studies show that deaf students often lag behind their hearing counterparts. This has often been framed in the past as a pathological problem–needing speech therapy–and not a cultural/

linguistic problem–recognizing the differences between ASL and English (Supalla, Wix & McKee, 2001). BiBi addresses this issue.

Although BiBi education is the increasingly preferred method of teaching deaf learners, the kinesthetic forms of Total Communication—gestures, fingerspelling, Signing Exact English, and Cued Speech, may be beneficial tools to aid hearing language learners. This paper will first give background information about kinesthetic learning and the components that make up Total Communication, then explore how Total Communication can be used in ESL learning, and finally discuss directions for future research.

Kinesthetic Learning

In kinesthetic learning, students do physical activities to obtain and retain information. Lengel & Kuczala (2010) stated that learning can become more efficient through movement. Movement makes more neural pathways accessible to learning and memory, engages the senses and whole-brain learning, not only language-oriented semantic memory/left-hemisphere brain activity, and provides for rehearsal of new information. Together, they create transfers of information from short-term working memory to long-term memory storage, making recall easier.

James Asher's Total Physical Response (TPR) is an example of kinesthetic learning. Developed in 1965, TPR has been used in language learning classes around the world. The idea behind TPR is that comprehension of words comes before speaking, so students can understand what words mean through action even before they can successfully reproduce speech in the L2 language. (Asher, 2007; 2009).

Schewe (2002) and Wagner (2002) concentrated on learning through the use of role-plays and dramas. Wagner stated:

> To participate in an improvisation, one needs to use the body not only to produce appropriate language but also to express emotion and ideas through gesture, posture, and facial expression. Because the scene in a drama is an imaginary one, the participant is free to exaggerate or assume a persona that frees him or her to experiment with a wider range of language than ordinary exchanges might evoke…[It] is effective because of the repeated pressure it puts on participants to respond. It is not enough for students to hear the target language spoken; they need to talk themselves. (p. 4)

In Howard Gardner's theory of Multiple Intelligences, the Bodily-Kinesthetic Intelligence deals with using the body to express ideas and feelings. Because signed languages such as ASL and MCE are the encoded symbol systems for the Bodily-Kinesthetic Intelligence (just as speaking and writing are the encoded symbol systems of the Linguistic Intelligence) (Armstrong, 2009), they may be useful to students in language learning. Please note that while ASL is a natural visual-spacial language with its own linguistics characteristics that differentiate it from spoken English, MCE is an umbrella term for various signing systems that give a visual representation of the English language. Some MCE signs are borrowed from ASL, using English word order and other grammatical features of English. Since this paper's focus is mainly on kinesthetic learning for hearing students, ASL as a whole language will not be discussed in detail.

The Components of Total Communication

Gestures

Gestures can be organized by placing them on "Kendon's continuum," a term coined by David McNeil based on work by Adam Kendon. The points of

the continuum are *gesticulation* (movements relatable to the speech it is used with), *emblems* (movements that have full meanings without words, for example, the OK sign), *pantomime* (complex, narrative, sequential movements without speech), and *signs* (lexical words in ASL and other signed languages). Gesticulation can then be subdivided into four categories: *iconic* (gestures that present images of concrete entities or actions), *metaphoric* (gestures that depict abstract ideas), *deictic* (pointing), and *beats* (gestures that move rhythmically along with spoken words) (McNeil, 1992; 2000).

Gestures are the earliest forms of communication for children. For deaf children, especially for the 90% who are born to hearing parents (Goldin-Meadow and Mayberry, 2001), these gestures become home signs and are used for communicating at home in deictic and iconic types. The forms of the gestures resemble sign language in structure, and depending on at which stage of life the person learned sign language, the morphology of the home signs has an impact on their use of ASL. For hearing children, gestures become integrated with speaking and complement each other in one communicative act (Goldin-Meadow, 1999).

Fingerspelling

Fingerspelling is the process of spelling out words by using manual representations of the written alphabet. In ASL, the manual alphabet consists of 26 handshapes that are made with one hand. While it is used for the names of people, places, and spelling out words that either do not have signs, or when signs are unknown by the user, it is also used for words borrowed from the English language. Some words for common objects, like "flour" or "rice," are always fingerspelled (Padden, 2006). In addition, it is used for abbreviations and initialized signs, where the handshape of the initial letter is used as part of the sign, and for making compound words when combined with signs, for

example, in the word "waterfall," the sign for "water" is combined with the fingerspelling of "fall."

Signing Exact English

Signing Exact English (SEE) is a type of Manually Signed English that was invented in the late 1960s-early 1970s by a committee led by Gerilee Gustason for three basic reasons: dissatisfaction with educational achievement levels of deaf children, increased knowledge of normal language development in hearing children and the importance of the first few years of life in this process, and dissatisfaction with the ambiguous input of speechreading alone (Gustason, 1990, p. 108). It uses some signs and features from ASL, but keeps English word order. Signing and speaking occur simultaneously.

SEE divides words into three groups based on their morphemes, basic, complex, and compound words. A basic word is defined by Gustason as "those words from which no letter can be taken away and still leave a whole word (eg. girl, run, or happy)" (1990, p. 116). When determining whether words in English will be represented with one sign, Gustason used the two out of three rule:

1) Is the word spelled the same?
2) Does the word sound the same?
3) Does the word mean the same thing?

If any two of the criteria are met, then one sign is used. For example *right*, *rite*, and *write* are signed differently because they have different spellings and meanings, but *bear* has only one sign even though it can be used in examples such as "to bear a burden," "to bear a child," and to "meet a bear."

Complex words use affixes such as *-s, -ing, un-, and dis-*, which are added

to basic words. When words have many affixes, middle affixes may be dropped as long as the meaning of the word is not compromised. Examinations may be signed as "EXAM+TION+S" rather than "EXAM+INE+TION+S" (Gustason, 1990)

Compound words are two basic words that together make a new word, but only if the meanings of the basic words are retained in the new word, for example, *blackbird* and *chalkboard*. If the meanings are not retained, then the word is treated as a basic word. *Understand* would be an example of a basic word since the meanings of "under" and "stand" are not present in the new word (Gustason, 1990).

Although SEE and other forms of MCE are used by hearing parents to communicate with their deaf children because the parents find it easier to learn than sign language, and because it was created to be used in the classroom, they are not meant to replace ASL as a communication system. "[Manually coded systems] are tools to help bridge the gap between two natural languages, and should never replace the languages that are necessary in the classroom" (Brown, 2009, p. 16).

Cued Speech

Cued Speech was invented by Orin Cornett at what is now Gallaudet University in Washington, D.C. in 1966 as a way to help deaf students achieve greater literacy in English by visually representing phonemes that occur in spoken language. It does not symbolize concepts, like signing, and is not fingerspelling. It is a "manual adjunct to speechreading that clarifies whatever spoken language is being presented" (Kipila and Williams-Scott, 1990. p. 143). Cueing can show the duration, rhythm, and rhyme of speech, as well as show real-time proper pronunciation (Kipila & Williams-Scott, 1990). Cornett had six requirements that he believed that a new system should have:

1) It must be clear, making all the essential details of the spoken language visibly evident.

2) It must be oral, so that there is consistent use of and dependence on the information visible on the mouth.

3) Any information added to what is available from seeing the mouth must be compatible (in timing, significance, etc.) with what is being said.

4) The system must be learnable by a very young deaf child through the process of consistent exposure to it in the home.

5) It must be learnable by hearing parents of average ability who are willing to make a reasonable effort to help their child.

6) It must be usable at near-normal speaking rates, at distances of up to 20 feet (As cited in Reynalds).

With this in mind, Cued Speech was designed as eight handshapes that represented consonant phonemes, and four hand placements that represented vowel phonemes. Together with a corresponding mouth shape, representations of phonemes occur that are clear and unambiguous (Franklin, 2006). This gives deaf learners what Moores describes as phonological awareness, "the sensitivity to the sound patterns of a spoken language" (as cited in Brown, 2009), and aids in literacy. Furthermore, phonemes that are made with the same lip position have different handshapes. For example, the bilabial consonants /b/, /m/, and /p/ would look the same to a lip-reader. However, if the consonants were mouthed while using Cued Speech, the correct sound can be known.

Cued Speech has also been used by speech pathologists and audiologists with hearing students who have speech and language problems. Children with auditory processing disorders alone, or combined with autism spectrum

disorders benefit from getting information visually (Beck, n.d). It also improves concentration since students must focus their attention on the aural, visual, and manual aspects of words (Clarke, n.d.), which would benefit students with attention-deficient disorder.

Total Communication and Language Learning

In the context of second language acquisition, Macedonia, Muller, & Friederici (2010) demonstrated that performing iconic gestures along with speech aided in the memorization of foreign words more than meaningless gestures did. SEE can be used as iconic gestures to help students retain vocabulary. Also, having students practice the sign together reinforces the retention of the target words.

Fingerspelling has been shown by Padden and Ramsey to be in correlation to reading comprehension (as cited by Baker, 2010). "Children who scored better on reading tests had good associative skills, such as the ability to write down words that were fingerspelled to them as well as the ability to translate initialized signs" (Baker, p. 3). This is supported by Goldin-Meadow & Mayberry (2001) who stated that deaf children of deaf parents were better readers than deaf children of hearing parents because they had sign language input at home as well as at school, where the language of instruction was MCE and spoken English.

While most research has looked into how fingerspelling aides in the litereacy of deaf children learning to read English, fingerspelling has been shown to benefit hearing early readers as well. The benefits are:

1) Aids instruction in multiple intelligences—students learn using Interpersonal Intelligence (working in groups) as well as Bodily-Kinesthetic Intelligence.

2) Boosts development of oral languages—students have the opportunity to form connections between seeing, and hearing, and "doing" words.

3) Supports knowledge of print and phonemic awareness—students are able to recognize printed letters and connect them to sounds.

4) Integrates easily into almost any reading program. (MAT Blog, 2012)

These same benefits would apply to second language learning as well.

Because Cued Speech is not a language itself, it can be used intensively or selectively as a teaching tool in an ESL classroom with hearing students. While Clarke (n.d) lists ways that Cued Speech can be used by language therapist for children, they would also be applicable for hearing English learners. Using Cued Speech improves sound discrimination at the syllable and word levels, including contrasting minimal pairs and voiced and unvoiced sounds. It can also be used to discriminate sounds that do not occur in the student's mother language. For example, Japanese students may confuse /l/ and /r/ when speaking, but if they are aware of the different cued sign, they can see which sound to make. Cued Speech can be useful for sound segmentation, blending, rhyming, reduction, and omission, which makes it easy to use as beat gestures. Morett, Gibbs, & Whinney's (2012) research on how gestures affect L2 communication show that students using beat and deitic gestures during conversations enhanced their L2 acquisition.

Future Directions

Research on Manually Coded English has focused mainly on children's literacy, both deaf and hearing, in primary and secondary schools. For hearing children, the use of MCE was shown to aid them in reading their L1 language, not in an ESL/L2 context. There has been research on adult language

learners' use of gestures, but those gestures were not related to signing systems. More research is needed to see if the kinesthetic forms of Total Communication would have the same benefits for adult language learners as has been shown for children in terms of literacy and vocabulary development. Research is also needed to see if one form of TC would benefit language learners more than another form, and how that correlates to existing language ability.

Concluding remarks

Deaf education in the United States has evolved from the days when sign language was repressed in schools. While the Bilingual-Bicultural education model has proven to give better results in getting deaf students using English at a higher academic level, the various kinesthetic forms that comprise Total Communication may have a use in English as a Second Language classes. Using gestures and signs along with spoken and written English allows for instruction to be given using physical, visual, oral, and aural modes of communication. More research is needed to see the degree in which Total Communication is beneficial in an ESL context.

References

Asher, J. (2007). TPR: after forty years, still a very good idea. Retrieved from http://www.tpr-world.com/japan-article.html.

Asher, J. (2009). The total physical response (trp): review of the evidence. Retrieved from http://www.tpr-world.com/review_evidence.pdf.

Armstrong, T. (2009). Multiple intelligences in the classroom, third edition. Alexandria, VA: ASCD.

Baker, S. (2010). *The importance of fingerspelling for reading*. Visual Language & Visual Learning Reasearch Brief. Retrieved from http://vl2.gallaudet.edu/assets/section7/document100.pdf.

Baynton, D. (1996). Forbidden signs: American culture and the campaign against sign language; Chicago, IL: University of Chicago Press.

Beck, P. (n.d.). *Sound approach*. In Cued Speech Association UK. Retrieved from http://www.cuedspeech.org.uk/information-about-cued-speech.

Brown, E. (2009). *One student, two languages: Print literacy in deaf students*. Retrieved from http://www.swarthmore.edu/SocSci/Linguistics/Theses09/BrownEliz.pdf.

Clarke, A. (n.d.). *Cued Speech with Speech and Language Disorders*. In Cued Speech Association UK. Retrieved October 10, 2013, from http://www.cuedspeech.org.uk/information-about-cued-speech.

Cummings, J. (2005). Teaching for cross-language transfer in dual language education: Possibilities and Pitfalls. TESOL Symposium on Dual Language Education. Istanbul. Retrieved from http://www.achievementseminars.com/seminar_series_2005_2006/readings/tesol.turkey.pdf.

Deaf Culture Centre. (n.d.). *What is bilingual bicultural deaf education and what should I look for in a bilingual education program*. Retrieved October 15, 2013, from http://www.deafculturecentre.ca/Public/Default.aspx?I=484.

Franklin, H. (2006). *Cued speech and literacy: History, research, and background information*. In National Cued Speech Association. Retrieved October, 10, 2013, from http://www.cuedspeech.org/.

Gallaudet University (n.d.). *Total communication. resources for mainstream programs*. Retrieved on October 15, 2013 from http://www.gallaudet.edu/clerc_center/information_and_resources/info_to_go/educate_children_(3_to_21)/resources_for_mainstream_programs/language_and_communication/total_communication.html.

Goldin-Meadow, S. (1999). *The development of gesture with and without speech in hearing and deaf children.* In Gesture, Speech, and Sign. Messing, L. & Campbell, R. (Eds.) pp. 117–132. Oxford: Oxford University Press.

Goldin-Meadow, S. & Mayberry, R. I. (2001). *How do profoundly deaf children learn to read?* In Learning Disabilities Research and Practice, 16(4) pp. 222–229.

Gustasan, G. (1990). *Signing exact english*. In Manual Communication: Implications for Education. Borstein, H. (Ed.) (pp. 108–127) Washington, DC. Gallaudet University Press.

Kipila, E. L. & Williams-Scott, B. (1990). *Cued speech*. In Manual Communication: Implications for Education. Borstein, H. (Ed.) (pp. 108–127) Washington, DC. Gallaudet University Press.

Lengel, T. & Kuczala, M. (2010). The kinesthetic classroom: Teaching and learning through movement. Thousand OaksCA/London. Corwin/RTC.

MAT Blog (2012). Sign language helps the hearing child learn to read, too. Retrieved from http://info.marygrove.edu/MATblog/bid/80962/Sign-language-helps-the-hearing-child-learn-to-read-too.

Mathur, G. & Napoli, D. J. (2011). *Introduction: why go round the deaf world.* In Mathur, G & Napoli, D. J. (Eds.) Deaf Around the World: The Impact of Language. pp. 3–15. New York. Oxford University Press.

McClue, P. (2013). *Setting the standard: an overview of the history and politics of prohibiting and promoting a national japanese sign language.* In Essays and Studies Vol. LXII March. Tokyo Woman's Christian University.

McNeil, D. (1992). Hand and mind: What gestures reveal about thought. Chicago, IL: Chicago University Press.

McNeil, D. (2000). Introduction. In McNeil (Ed). Language and gesture (pp. 1–10). Chicago, IL: Chicago University Press.

Morett, L., Gibbs, W., & Whinney, B. (2012). The role of gesture in second language learning: communication acquisition, & retention. Retrieved from http://mind modeling.org/cogsci2012/papers/0143/paper0143.pdf.

Padden, C. (2006). Learning to fingerspell twice: Young signing children's acquisition of fingerspelling in Schick, B., Marschark, M., and Spencer P. E. (Eds.) Advances in the sign language development of deaf children (pp. 189–201). New York: Oxford University Press.

Reynalds, S. E. (2007). A*n examination of cued speech as a tool for language, literacy, and bilingualism for children who are deaf or hard of hearing.* In Independent Studies and Captones. Paper 315. Program in Audiology and Communication Sciences, Washington University School of Medicine. Retrieved October 14, 2013, from http://digitalcommons.wustl.edu/pacs_capstones/315.

Supalla, S. J., Wix, T. R., & McKee, C. (2001). Print as a primary source of English for deaf learners. In One mind, two languages: bilingual language Processing. Nicol. J. L. (Ed.) Blackwell Publishers, Ltd. Oxford.

Wagner, B. J. (2002). Understanding drama-based Education in Brauer, G. (Ed.) Body and language: intercultural learning through drama (pp. 3–18). Ablex Publishing. Westport.