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**Title of lecture:**

## **LINGUISTIC ACCESSIBILITY AND DEAF CHILDREN**

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## INTRODUCTION

Signed language are generally deemed as having inherent advantages for deaf populations of a given society. This is because the language is processed through the visual and gestural modality (as opposed to vocal/aural for spoken language). American Sign Language (ASL) may serve as a good example of an accessible language for deaf children, but its role in deaf education does not necessarily reflect this fact. English as spoken language for deaf children are not fully appreciated. English literacy is best described as elusive, especially when deaf children do not enjoy auditory access to the language involved. The field of deaf education is now besieged by number of issues ranging from the overrated value of spoken language to the creation of signed version of English that is not on par with ASL or any naturally evolved signed language.

### 1- SIGNED LANGUAGE AND DEAF EDUCATION

The United States was part of a groundbreaking deaf education movement with strong roots in the Enlightenment that originated in Europe. The dark notion that spoken language constitutes the only for education was challenged when deaf education became a reality. Signing was conceived as an important tool for discourse in the classroom. This early conceptualization of deaf education took place in France in the 18<sup>th</sup> century. The early deaf education model, however, was how signing should interact with language (what works or does not work). This is especially true concerning how Methodical Sign dominated deaf education right from the start.

One must understand that Natural Sign, was developed among deaf populations, and was readily available at the time. The educators were quick to come up with Methodical Sign, developed based on the structure of the French language. The notion of the deaf children being able to learn and use French through the signed medium was attractive. According to Supalla and McKee(2002), the status of a 'working language' as found with Natural Sign should precede deaf children's need in learning whatever language is being used in the society. Methodical Sign's failure as a sign system lies, in part with the effects of the visual and gestural modality in shaping the language structure. With the advent of signing in deaf education the situation for deaf children spiralled downwards as misconceptions were created about human language in general.

The first American school for the deaf was established in 1814. Bobian adamantly opposed the choice of Methodical Sign over Natural Sign, but he was not effective in explaining his position. The French educator criticized the language planning effort with Methodical Sign by stating that spoken language was corrupted with rules and grammar. That is, the French language was not natural and thus would be suitable for sign medium. Natural Sign (what French Sign Language was called back then) was described as a language in its pure form as compared to spoken language. Unfortunately, support for the signed medium ensued. Given that only spoken language was thought to have linguistic structure, educators understandably began to believe

that deaf children were entitled to learn and use language. Thus it was assumed that deaf children needed to be language competent through spoken language in order to become literate.

## **2- THE DISCOVERY OF AMERICAN SIGN LANGUAGE**

In the 1960s, American Sign Language was first formally examined as a human language through the work of William C. Stokoe (Stokoe, 1960; Stokoe, Casterline and Croneberg, 1965). By this time, Gallaudet University was established along with a notional network of schools for the deaf. Stokoe had to learn how to sign in order to teach deaf students there. Unlike the schools, Gallaudet University was more supportive of signing as a medium for instruction (van Cleve and Crouch, 1989). Deaf people relied on different signed languages around the world, no one could confirm, at least scientifically, that the signed language used in the United States was different from British Signed Language, for example : although non-deaf citizens of the United States and Great Britain spoke a common language, this was not the case with deaf citizens. According to Meier (2002), research conducted on ASL was thrown into high gear in 1970s and 1980s. This paid off with the language being accepted as a full-fledged human language. Equally important is how the original finding with ASL were successfully repeated with a number of signed languages used in various parts of the world, notably Europe (Brennan and Hayhurst, 1980: Hansen , 1980; Mottez and Markowicz, 1980 and Woll, 2003). The emphasis was on making generalities in regard to how signed languages share linguistic properties found in spoken languages. Information regarding what is unique to signed language was still needed. This is especially true concerning the struggle over Methodical Sign and failure of educators to understand the complication surrounding the relationship between signed and spoken languages.

Recently Zeshan makes the claim that the "signed languages are of great typological importance by virtue of their visual-gestural modality. Which makes them stand out as a distinct language type in opposition to the entirety of the spoken languages. Brennan (1986) reported that Stokoe himself not only demonstrated how signs are well organized, but that they are organized differently from spoken words. Stokoe described the organization of ASL signs as simultaneous as opposed to sequential (typical for spoken words). When looking at individual signs closely, they can be described as monosyllabic. The signs do not resemble how spoken words are organized (i.e. sequential units of distinctive sound features).

Whatever happens at the word level is expected to create an impact on the rest of the language structure(e.g, phonological, morphological, and syntactic). The time, English, not French , was development a number of sign systems(e.g., Seeing Essential English , Signing Exact English , Linguistics of Visual English, and Signed English) Manually Coded English (MCE) is the term describing all of these English-based sign systems. The revival of signing in the classroom with deaf children can be attributed to the linguistic work done on ASL. The new concept that emerged was that language is not confined to speech. Because of this , educators were forced to re-evaluate the evaluate the educational value of signing in general.

### 3- UNDERSTANDING SIGNED LANGUAGE STRUCTURE

A sign functions very much the same as a word does in spoken language. Structurally, a sign requires the use of hand shape, which must move one way or another. Without the hand shape, there would be no physical way of showing movement internal to sign. Additionally, a hand shape without movement would mean a 'static' sign falling short of what a word should look like in the signed medium. Hand shape and movement are to the formation of signs, they are only two of the three parameters that Stokoe identified for the ASL lexicon. The third parameter, location, is also important for sign formation.

With words studied in a large number of spoken languages, Channon found that they can have more than one segment (or unrelated syllables to for words) as in the English examples of 'permit' or 'understand'. This is something that signed languages do not include in their lexicon. Owing to the unique organization of signs, there is a possibility that the boundaries are salient to the point where a person can easily perceive the beginning and ending of signs.

PINKER (1994: 160) remarked that this characteristic of words become apparent when we listen to speech in a foreign language: it is impossible to tell where one word ends and the next begins. There is an experimental study that examines how word segmentation works in the signed medium. The participants were asked to decide whether an example of signing viewed on the videotape was one or two words.

SUPALLA (1990) confirms the overt saliency for word boundaries in the signed medium as both novice signers and ASL signers were able to reliably segment the sign stream. The sequenced signs presented were derived from a different signed language, not ASL. Yet, the 'unintelligible' signs were successfully segmented based on how signs are formed phonologically. To repeat, the signs were easily identified regardless of the fact that the individuals participating in the experiment did not sign or knew a different signed language.

### 4- CONSIDERATIONS FOR MANUALLY CODED ENGLISH

Deaf children have been subject to MCE for language acquisition and frequently as their sole linguistic input. To be exact, the English-based sign systems rely on the use of invented prefixes and suffixes, to be used along with roots (borrowed from ASL).

Upon analysis, the form of WATCHING appears to violate how the structure of phonology and morphology should operate in signed language. The number of hand shapes used in the inflected sign is two, and they are not related to each other (e.g., opening or closing as found in some ASL signs). The first hand shape (for WATCH) involves an opening through the extension of index and middle fingers, and the second hand shape (for -ING) is also opened with the pinkie. The linear affix has its own movement and locations.

At this point, it is clear that the linearly affixed sign consists of more than one segment and its structure (in WATCHING) is not rhythmic. For these reasons, the root and affix are essentially split according to the signed medium. The effects on MCE are profound, resulting in a structural deficiency alien to the perception and processing underlying any human language.

Linear affixes being bound morphemes were treated as if they were free morphemes (or full signs). This kind of error indicates that deaf children are not able to learn the rule of the present progressive tense in English by using MCE. In contrast, children who can hear and learn spoken English do not experience the learning difficulty described here .

The acquisition studies with ASL, on the other hand, indicate that deaf children are able to learn the language. There is no learning difficulty or structural deficiency in the literature reported for the signed language. The fact that ASL is a morphologically rich language does not stop deaf children from acquiring the language. The prospect of deaf children becoming native users of English through MCE has not been reported in the literature. In fact, the literature reports on their lack of mastery with the English language. It seems safe to consider English, signed or not, to be inherently accessible owing to the impact of hearing loss.

## **DISCUSSION AND CONCLUSION**

As part of understanding linguistic accessibility for deaf children, the structure of signed language must meet the cognitive prerequisites for perception and processing in the visual/gestural modality. Recall that the motivation for MCE is strong with its morph syntactic structure being consistent with English print. MCE is supposedly helpful when deaf children can map ‘word for word’ between the print and signing. This argument can be considered only if MCE works as a linguistic system. If deaf children are not learning English through MCE, they cannot make a connection with print as anticipated. There is also a criticism made on linking MCE to reading theory. Speech-based phonetic skills are still missing and deaf children using MCE would not be able to decode words in English text.

Educators supporting MCE may respond that speech therapy and auditory training go ‘hand in hand’ with the signing component of English (better known as Total Communication or Simultaneous Communication). The debate is common place in deaf education where futile attempts cause educators to ‘run in circles’. Language modality is what matters and it suggests that a formal distinction needs to be made between spoken languages and signed languages. A number of issues can be revisited under this new light. For example, bilingual education as advocated by some educators as a model to consider for deaf education in recent years (e.g., Strong, 1988, 1995) would not be appropriate.

**PAUL AND QUIGLEY (1987)** argued that the reading process according to bilingual education is problematic for deaf children. Children who can hear enjoy auditory access to the spoken form for reading development purposes as well as repetition of the learning process whereby two languages are in the same modality (e.g., Spanish and English). The closest comparison to bilingual education for deaf children would be when two signed languages are considered (e.g., ASL and Japanese Sign Language).

The educational situation for deaf children is different with one being a signed language and the other a spoken language. What deaf education can do is to account for reading instruction by requiring the combination of two languages; with ASL serving as the ‘oral’ language and English at the ‘print’ end. Drastic measures need to be adopted, especially if deaf children are fully capable of acquiring and mastering a language. A cross linguistic arrangement is necessary given that deaf children need to draw on their signed language knowledge to support reading development in English.

The resulting design requires the use of special literacy tools and instructional procedures to facilitate the transition from ASL to English. This is where deaf children can make a connection with English print based on what they know in the signed language.

Some of the changes in deaf education include no longer treating speech as central to the reading process or even in place of a signed language. Speech can be more effectively taught to a deaf child (i.e., for the purpose of talking) based on the English language knowledge achieved through reading instruction. This would serve as another justification for the reform of deaf education.

**SPENCER AND MARSCHARK (2003)** made it clear that regardless of the advances in technology, cochlear implant surgery should not be perceived as a cure to deafness, especially when the surgery “does not change deaf people into hearing people” .

Those children who undergo cochlear implant surgery are expected to receive extensive speech therapy and auditory training. This does not constitute language acquisition in a true sense. With or without cochlear implants, deaf children are entitled to learning a signed language as a linguistic compensation for their disability. With the concept of linguistic accessibility, educators must not overvalue spoken language as it would mean discrimination against children who suffer any form of hearing impairment. With the provision of special literacy tools and instructional procedures, a research-based design for deaf education will ensure that theory and practice are combined to remove sound as a barrier to English and reading development.