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Looking Back, Thinking Forward: Signed Language Research in North America

Abstract

This paper examines the historical developments in the area of signed language research and deaf education in North America. By examining history, it may provide insight into the lessons learned over the past 30 years, and provide direction for future research initiatives and best practices in deaf education.

Introduction

This institute is an exciting opportunity for the exchange of experiences designed to improve the educational opportunities for children with special needs, and deaf and hard of hearing children. The goal of this paper is to describe some of the critical events that have shaped signed language research in North America and to link those events to important changes in the education of deaf children. By describing our past, it is possible to examine what worked well and what did not work well, so that the lessons learned become part of the planning for the future.

For the purposes of this paper, signed languages refers to any natural signed language used by deaf people. For example, in Canada there are two official signed languages, American Sign Language (ASL), used by Anglophone deaf people and Langue des Signes de Quebecoise (LSQ) used by Francophone deaf people. In addition, there is growing interest into other forms of signed language used by our indigenous peoples of the Northwest Territories and Nunavut. It is acknowledged that every country likely has a natural sign language, or multiple languages, reflecting the culture of the

deaf people living there. For example, in countries such as Switzerland, there are four natural signed languages used by the Deaf people, reflecting the influences of French, Italian, German and Swiss communities. By contrast, a sign system that allows for signing and talking simultaneously is an artificial code, and is not a natural language.

Signed Language Research in North America

During the past several decades, an ever-changing body of literature describing the signed languages of deaf people has added a wholly new dimension both to speculation concerning the origin of language and to definitions of what constitutes language (Armstrong, 1999). The idea that these sign systems might actually be languages originated with William C. Stokoe, a language scholar who began his work at Gallaudet University (then Gallaudet College) in the 1950's. Stokoe created a descriptive system for what has come to be known as American Sign Language (ASL) that was based on the linguistic principles of contrast at the sublexical level (the level below the sign or word), thereby suggesting that signed languages might have identifiable "phonological" levels and greatly expanding the range of phenomena studies by linguists.

Stokoe's work also supported reemerging attempts to describe the stages by which human languages emerged during the evolutionary history of the species, an area of inquiry that had fallen into disrepute. Speculation about the evolution of human languages was heightened following the appearance of Darwin's Origin of Species, but with little supporting evidence, it tended to be highly suspect. This area was so controversial that in 1866 the Linguistic Society of Paris imposed a ban on such speculation at its meetings. Stokoe and other anthropological and linguistic scholars entered this field of speculation during the 1960's and 1970's and placed it on a sounder scientific foundation (Armstrong, 1999).

Since Stokoe's initial insight, a large body of literature has arisen documenting attempts to define the extent of comparison that is possible between a signed and spoken language and the role that communication in

each modality have played in the evolution of the human capacity for language. Stokoe pointed out that significant differences between signed and spoken languages resulted from differences in the capacities of the organs of perception sensitive to visual and aural media. In general, Armstrong (1999) points out that human beings have much greater sensory acuity in the visual medium and this makes it possible in signed language to use what Peirce has called "icons" to a degree impossible for spoken languages.

For many hearing people who are unfamiliar with the signed languages of people who are deaf it is difficult to conceive of them as having the same communicative power as spoken languages, because of the radically difference mode of transmission. Over the centuries people have viewed signed languages as "gesture-languages" that cannot match spoken language. Armstrong (1999) quotes Edward Tylor, an influential British anthropologist of the nineteenth century:

"It has to be noticed that the gesture-language by no means matches, sign for word, with our spoken language. One reason is that it has so little power of expressing abstract ideas".

Yet others have remarked on the tendency of all known signed languages to be memetic or "iconic". In the 1950's, psychologists such as Myklebust suggested that manual languages were more pictorial, less symbolic and lacked precision, subtlety and flexibility, and these statements can still be heard today.

Most countries in the world can identify instances where minority languages are disparaged in support of political positions. The dogma of equality of spoken languages took root in the early twentieth century. Armstrong (1999) reminds us of the 1921 classic Language, where Sapir said: "The lowliest South African Bushman speaks in the forms of a rich symbolic system that is in essence perfectly comparable to the speech of the cultivated Frenchman" However, as Armstrong points out, steps toward similar treatment of deaf people's signed languages were not taken until the 1950's.

Over the years, thinking about the signed languages of deaf people has ranged between acceptance and rejection of their legitimacy. For example, the first schools for deaf people, based on instruction in sign language, arose during the European Enlightenment of the eighteenth century and appear to have flourished in an atmosphere of tolerance, at least in France and the United States during the early part of the nineteenth century. The roots of American Sign Language have been traced to the school for the deaf in Paris that was founded by the Abbe de l'Eppee in 1755. During the mid-to-late nineteenth centuries, the method of oralism came to dominate the education of deaf children throughout the Western world. According to the oralists, sign language was a primitive form of communication that interfered with the struggle to teach deaf people to speak clearly and to speechread, and, as it was only by making them appear to be hearing that they could be restored to society to participate fully in all aspects of life. Thus signing had to be suppressed (Armstrong, 1999).

Research in signed languages following William Stokoe's pioneering work tended to focus on the similarities between sign and speech. Stokoe focused first on the visual analog in ASL of the sound systems (phonological systems) of spoken languages. His goal was to invent a system for the language that was based on linguistic principles. Realizing that he had to overcome the linguistic prejudices of many educators and psychologists working with deaf people, Stokoe felt these principles would have to closely emulate those that had been used in spoken language research. These principles included identification of at least the following: sublexical structure and contrast at the sublexical level. Stokoe also realized that an important difference between signed and spoken languages, something that other sign linguists have sometimes forgotten or ignored – the problem of simultaneity in the presentation of various elements of signs. He described these elements as "cheremes" – the visual-gestural analogs of phonemes.

Stokoe's three parameters of a sign can be described as follows: (1) *location* where the sign is made, (2) *handshap*e or distinctive configuration of the hand or hands making it, and (3) the action or *movement* of the hand(s). Other aspects of the language, such as facial markers and non-manual signals, are now recognized as part of the language, and are not as

easily described by this system, but the system has stood the test of time and can still be used in the description of signed languages.

Stokoe's success in winning acceptance of ASL as a natural human language was a huge achievement in the area of linguistic study. Today we see a large number of language scholars working with ASL and other signed languages, and the literature describing ASL may surpass that of most of the world's spoken languages (Armstrong, 1999). However these advancements were not easily achieved. There were many language scholars, and even deaf people themselves, who challenged Stokoe, and wanted to deny linguistic status to visual-gestural systems.

Linguistics and Deaf Education

Like many field of study, linguistics and education of deaf children have shared an uneasy relationship in North America. In the 1970's ASL research flourished in North America, documenting the grammatical structure of the language, semantic categories, language variation, and so on. At the same time, educators were creating English-based sign systems such as Seeing Essential English (SEE I) (Anthony, 1971) and Signing Exact English (SEE II) (Gustason, Pfetzing and Zawolkow, 1980). These systems borrowed signs from ASL and attempted to put them into English grammatical order in much the say was as Abbe de l'Eppe created methodical signs by putting natural French signs into French word order. Developers of English-based signs created systems by inventing signs, initializing existing signs, and inventing prefixes, suffixes, etc, so that the signs were more representative of English. Some developers avoided the use of fingerspelling because they falsely believed it was too difficult for young children to understand and use (Easterbrooks and Baker, 2002)

ASL, like other signed languages has been found to have signs that are arbitrary and abstract as well as signs that are iconic and concrete. Signed languages remain open-ended in their ability to incorporate new signs, evolving to meet the linguistic needs of the community of users. The 1970's also brought about widespread use of Total Communication (TC), a philosophy that consisted of using whatever methods would support the

child. This included auditory training, speech, speechreading, fingerspelling, and the language of signs (ASL) (Nover and Andrews, 1998). Educators embraced Total Communication because they could continue their educational practices, only adding signs into their existing instructional repertoire. For this to work, though, they needed a signing system that matched spoken language.

As TC gained in acceptance, the use of oral approaches declined. The new philosophy brought hopes of achieving greater levels of literacy for deaf students, however it failed to produce the desired outcomes for many students. The premise behind Total Communication was that if children were exposed to English visually in the form of signs, they would learn English naturally in the same way that hearing children do. However, many children with hearing losses never achieved this goal (Easterbrooks & Baker, 2002). Johnson, Liddell, and Erting (1989) suggest that one of the challenges of the Total Communication was that it encouraged speaking and signing simultaneously or *sim com*. According to these authors, there are inherent problems in depicting English, an auditory language, through signs. They found that most of the signs used by teachers did not match their spoken output. English is an auditory, sequential language while ASL is a visual spatial language, so blending the two languages into a clear language code is challenging. Those students who have usable residual hearing or have postlingual losses may benefit from English-based signs, as they are able to fill in information gaps through their residual hearing and speechreading skills. However English-based signs provide an incomplete language code for profoundly deaf children who rely solely on vision to access information (Easterbrooks and Baker, 2002).

Unfortunately, deaf children who were educated in the 1970's and 1980's did not increase literacy levels as was hoped by the founders of TC. Strong suggested: "Disappointing results from these approaches may stem from the fact that none represents a complete language system in itself to the deaf child." (Easterbrooks and Baker, 2002, p.15). The Bilingual-bicultural philosophy began to appear in the 1980s due to the disappointing results of total communication and oral methods employed in deaf education. The philosophical approach stemmed from a growing body of research in child

language acquisition, sign language linguistics and cognitive science. These studies reported that deaf children of deaf parents who were exposed to ASL had superior academic achievement, literacy, English usage, and social-emotional development. The philosophy holds that deaf children learn more effectively through their unimpaired visual channel than through the impaired auditory pathways (Easterbrooks and Baker, 2002). The most efficient and effect visual language for deaf children is a natural sign language, such as ASL. The approach chooses ASL as the first language of the deaf child, and English as the second language. There is growing acceptant and recognition of this approach in the education of deaf children in North America, Sweden, Denmark, Finland, and Australia (Mahshie, 1995). It is interesting to note that Mashie indicates that deaf children in some European countries are learning several languages, given the methodological changes to a bilingual approach.

So what have we learned from these educational changes and research findings? Whether we follow old approaches or new approaches we can no longer view signed languages and language acquisition for deaf children as a simple process. There are many new directions being forged in signed language research and deaf education. Some examples from Canada may illustrate this: the Canadian Dictionary of ASL was produced by the Canadian Cultural Society of the Deaf and published by the University of Alberta. Countless Deaf people had input into the research that informs the dictionary, with the project spanning almost two decades. This is an important lesson in that people who use the language must be actively involved in the research about their language. As well, language cannot be studied out of context, at just the lexical level, rather we must understand the grammatical structures that convey the language. As well, we have learned that there isn't a need to "change" the natural languages of deaf people to fit the structure of national spoken languages. The University of Manitoba is fortunate to have one of North America's premier signed language researchers, Dr. Terry Janzen, who is studying the grammaticization of signed languages, passive constructions in ASL and aspects of topic marking within a topic/comment language. A final example of how research is influencing changes in deaf education: the Milton School for the Deaf in Ontario and the Alberta School for the Deaf in Edmonton, Alberta have been

restructured their programs to include bilingual-bicultural approaches, and they are documenting their successes of using a natural language to deliver an effective curriculum that is resulting in increased literacy levels of deaf children. These "evidence-based" changes seem to embody what Mashie (1995) so clearly states: In order to move toward an education that ensures Deaf children equal participation in society through proficiency in both the Sign Language and the majority language of a country, it is important to realize: It is not deaf children that need remediation, it is the system that educates them (p. 179). Our task is to build on the research findings about natural signed languages and to incorporate that evidence into our practices.

Summary

As we consider joint research projects over the next five years, it may be useful to consider the history of signed language research in North America, and some of the critical movements in the education of deaf children. By looking backward, we can learn from the strengths and mistakes of the past, and create an informed future direction. As Dr. Petryshyn has reminded us, there are many opportunities to support change and enhance the excellent work that is taking place in Ukraine. To be effective, a partnership approach that includes parents, deaf community members, teachers and administrators, supported by this international exchange will be needed. One of the opportunities is to continue to work collaboratively with communities of Deaf people to document and describe natural Ukrainian Sign Language, and to consider its role in the education of deaf children. Thank you for the opportunity to participate in this international meeting of the Institute of Special Pedagogy. I look forward to our conversations and shared exchange.