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AUTHOR Paul, Peter V.; Gramly, Charles F.
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ABSTRACT

Despite the fact that American Sign Language (ASL) has no written component, it still may be possible for deaf students to develop English literacy skills. To assess the effects of ASL on the development of English, it is proposed that native, and possibly non-native, signers be educated in a bilingual minority-language immersion program which emphasizes developing and maintaining communicative competence in ASL and, eventually, developing English literacy and educational and cultural concepts. From preschool to approximately grade 3, all instruction would be delivered through immersion in the minority language (ASL). During grade 3, certain signing modifications can be made to help facilitate the transition to written English. Eventually both ASL and written English could be used more or less equally throughout the school day. Within this proposed model, the article describes several reading-related activities using ASL. A six-page reference list concludes the document. (JW)

Is Reading Proficiency in L1 Really Necessary for Reading Proficiency in L2, Especially When L1 Has No Written Form?: A Perspective on American Sign Language and English

Peter V. Paul

Department of Human Services Education

The Ohio State University

Charles F. Gramly

Interpreting/Transliterating Program

Columbus Technical Institute

ADDRESS FOR CORRESPONDENCE:

Peter V. Paul, Ph.D.
The Ohio State University
Department of Human Services Education
356 Arps Hall
1945 North High Street
Columbus, Ohio 43210

Running Head: A PERSPECTIVE ON ASL AND ENGLISH

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Abstract

The main objective of this paper is to discuss whether deaf students can achieve reading proficiency in English (L2) given that American Sign Language (as L1) does not have a secondary written component. It is argued that previous research studies have not systematically investigated the effects of ASL on the development of English. This is mainly due to 1) the lack of understanding on how ASL differs from English and from the English-based signed systems, and 2) the limited instructional use of ASL in a bilingual or English-as-a-second-language education environment. To assess the relationship between American Sign Language and the development of reading in English, it is proposed that deaf students should be educated in a bilingual minority-language immersion program, and that the reading curriculum should adhere to the prevailing findings in L1 reading research. Examples of reading-related activities using American Sign Language are discussed.

Is Reading Proficiency in L1 Really Necessary for Reading Proficiency in L2, Especially When L1 Has No Written Form?: A Perspective on American Sign Language and English

Among most linguists, there is little doubt that American Sign Language (ASL) is a bona fide language and is the first or native language for some deaf students (Luetke-Stahlman, 1983; Quigley & Paul, 1984a, 1984b; Reagan, 1985). Consequently, it has been argued that English should be taught as a second language to these students by using language-teaching methods found to be effective in bilingual or second-language (L2) learning programs. It is assumed that deaf students can proceed from knowing a signed language such as ASL to learning the written form of a spoken language such as English. Theoretically, competency in one language should make it easier to develop competency in a second language.

The main objective of this paper is to discuss whether prelingually deaf students can achieve reading proficiency in English (L2) given that American Sign Language (as L1) does not have a written component. The prevailing perspectives regarding this issue have been based on the research findings on reading achievement and processes of deaf students in traditional, submersion education programs. We argue, however, that these

studies have not directly addressed the question of whether ASL-using deaf students can acquire adequate English reading skills. Our arguments are presented in relation to three research areas: 1) the effects of ASL on the development of English skills, 2) cognitive processes and reading, and 3) the instructional use of ASL in teaching English as a second language. To assess the effects of American Sign Language on the development of English, we propose that native, and possibly non-native, signers be educated in a bilingual minority-language immersion program. Within this proposed model, a brief description of some reading-related activities using American Sign Language is provided.

American Sign Language

American Sign Language is a visual-gestural, rule-governed language (Baker & Cokely, 1980; Lane & Grosjean, 1980; Wilbur, 1987). The linguistic units consist of the simultaneous occurrence of movements, shapes, and positions of certain body parts, namely, the hands, arms, shoulders, eyes, face, and head. As a signed language, ASL is particularly structured to accommodate the visual capabilities of the eye and motor capabilities of the body. Deaf native signers are simultaneously able to monitor the manual and nonmanual aspects of their language. In general, the manual aspects refer to the shapes, positions and movements of the hands,

while nonmanual aspects consist of systematic gestures involving the shoulders, cheeks, lips, tongue, eyes, and eyebrows.

American Sign Language differs from English in two important ways: form and grammar (Baker & Cokely, 1980; Quigley & Paul, 1984b; Wilbur, 1979, 1987). English is a spoken language with speech as its primary form, and writing as the corresponding secondary form. ASL is a signed language executed without the accompaniment of speech. The primary form of ASL is sign; it has no corresponding written form. American Sign Language has its own grammar which is not derived from that of English. As with any other two languages, it is generally possible to interpret or translate signed ASL utterances into English phrases or sentences but much less possible to transliterate signs into individual English words and vice versa.

If it is accepted that American Sign Language differs from English, then it should be clear how it differs from contrived sign systems. Signed systems are forms of English-based signing; that is, they were developed to represent manually the morphosyntactic structure of English. In other words, there is an attempt to create artificially a one-to-one correspondence between a word in English and a sign in ASL for the purpose of teaching English grammar to deaf students.

While the lexicon of American Sign Language supposedly forms the basis of the signs in the English-based signed systems, it should be emphasized that most of these signs: 1) are frozen, that is, used only in their citation or uninflected form, and 2) do not retain their original syntactical and semantic properties as evident in the context of ASL (Wilbur, 1979; 1987). This is one of the most important differences between a signed language and a signed system. Consider the following sentence: The woman is looking for her shoe. In several English-based signed systems, the phrase looking for is executed with three signs, LOOK, -ING, and FOR (e.g., Bornstein, Saulnier, & Hamilton, 1983). In American Sign Language, the sign often glossed as the English word LOOK means to watch, see, or look at, and FOR means with a purpose. The sign -ING is a contrived manual marker which contains no real meaning for the native ASL signer. Thus, native ASL users might misunderstand the meaning of the sentence in coded form. In contrast, native signers express the concept looking for with a unitary sign that means to hunt or search.

ASL and the Development of English

The results of national surveys reveal that the overwhelming majority of 18-to-19-year-old deaf students graduating from high schools are reading no better than the average 9-or-10-year-old hearing students (Allen, 1986; DiFrancesca, 1972; Trybus &

Karchmer, 1977). It is obvious that present methods of teaching English to deaf students are not effective. Furthermore, this situation has remained virtually unchanged since the beginning of the 1900's (Quigley & Paul, 1986).

One of the shortcomings of national surveys is that they obscure the performances of certain subgroups within the hearing-impaired student population. If deaf students come to school knowing a language, this language is most likely to be American Sign Language. Unlike most other deaf students, this subgroup of ASL-using students is equipped with well-developed, internalized cognitive and linguistic foundations. Like other first language learners, these students have used hypothesis-testing phenomena such as under- and overextensions. These and other first language-learning strategies should make it possible for them to acquire a second language in a favorable education environment.

To study this subgroup of ASL-using students in depth, most investigators have compared the performances of deaf students of deaf parents with deaf students of hearing parents (Meadow, 1968; Quigley & Frisina, 1961; Stuckless & Birch, 1966). Within this paradigm, it is typically assumed that deaf parents only sign when communicating to their children and that the form of signing is most likely American Sign Language. The consistent finding has been that the students with deaf parents perform significantly

better than those with hearing parents on reading and other educational achievement batteries. Early researchers asserted that the superior scores of deaf students with deaf parents were the result of early and consistent exposure to a sign language. Later studies, however, presented an opposing view; namely, that the superior performances were the result of exposure to some form of English-based signing in the home and school (Brasel & Quigley, 1977).

We argue here that the data regarding the signing behavior of the parents and students were incomplete or probably not completely accurate. First, in these investigations, deaf parents were requested to describe their signing on written questionnaires. It is possible that some, or even most, of them could have known or been using ASL along with other types of signing but were unaware of or reluctant to report it (Baker & Cokely, 1980; Gannon, 1981). Second, using written questionnaires without the accompaniment of video-taped interviews may not be a reliable method for collecting this type of information. Finally, it is possible that some, or even most, of the students who performed well on the educational assessments in these studies may have also achieved various levels of competency in ASL.

Support for this last assertion may be found in more recent investigations. These studies analysed the signing of students supposedly exposed only to some form of English-based

signing in classroom environments (Hatfield, Caccamise, & Siple, 1978; Kluwin, 1981; Livingston, 1983; Maxwell, 1983; Stewart, 1985). It appears that the overwhelming majority of these students who do not know American Sign Language as a first language acquire it as they interact with others who are native users. The ease of acquisition is due mainly to the fact that ASL is better structured than the English-based signed systems in meeting the needs and capabilities of the eye for communication (Baker & Cokely, 1980; Wilbur, 1979; 1987).

Cognitive Processes and Reading

Research on cognitive processes and reading seems to imply that ASL-using deaf students or those who depend predominantly on manual/signing encoding while reading may have great difficulty in learning to become skilled readers. The basis for this assumption is that there appears to be a strong relationship between internal coding strategies and reading comprehension abilities (e.g., Conrad, 1979; Lake, 1980). It has been hypothesized that normal-hearing children develop an internal representation of the spoken language to which they are typically exposed. This speech-based representation is considered important for engaging in cognitive activities such as memory and making inferences necessary for the development of reading.

Based on short-term memory analyses, most deaf students use predominantly a nonspeech-based code such as signed, dactylic (finger spelling), or graphemic. These students supposedly do not read as well as those who use a predominantly phonological or speech-based code (Hanson, 1982, 1985; Lichtenstein, 1984, 1985, in press). The superiority of speech-based recoders over visual or sign recoders is attributed to the more efficient representation of nonlinear English grammatical structures such as the medial relative clause and the passive voice in working memory capacity, making it easier to understand these structures in print.

We agree that the use of speech recoding strategies enhances reading comprehension. In the current interactive view of reading, however, there are a number of other dynamic, cognitive processing strategies that are also important and may be more readily attainable by ASL-using deaf students. Comprehension proceeds from top down as well as bottom up; that is, it is driven by preexisting concepts in the reader's head and by the data in the text (Anderson, 1981, 1985; Rumelhart, 1985). In fact, the central role of background or prior knowledge in helping readers to construct meaning from the text cannot be overemphasized. This explains, in part, why reading proficiency in L2 by L1 readers may be possible without the accompaniment of L2 oral proficiency (Cummins, 1984; Saville-Troike, 1984).

For the English reading comprehension abilities of most deaf students to improve, there must be, in the least, (King & Quigley, 1985):

1) ...development of real-world knowledge, cognitive abilities, and linguistic skills...;
2) development of techniques for teaching reading that are related to the communication mode of the deaf child, which is usually visual rather than auditory; and
3) development of reading materials that match the real-world knowledge and linguistic skills of deaf children more closely than do most of the materials developed for hearing children. (pp. xii and xiii)

It is possible that the use of ASL will best accomplish items 1 and 2 above for most deaf students.

Instructional Use of American Sign Language

As discussed previously, the native language of some deaf students is American Sign Language. For these students, and perhaps non-native users as well, ASL should be used as an instructional approach to teach English literacy skills in a bilingual or ESL program (Barnum, 1984; Paul & Quigley, in press; Quigley & Paul, 1984a). It appears, however, that many educators have not accepted American Sign Language or the concept of

bilingual education as part of their educational philosophy. Consequently, there are very little data in this area.

In the few existing documented studies, the language-teaching approach has been to compare and contrast the structures of ASL and English on a sentential or story level (Crutchfield, 1972; Jones, 1979; Marbury & Mackinson-Smyth, 1986). The emphasis is on demonstrating similarities of grammatical acceptability and unacceptability in both languages. In other instances, ASL-using students are taught to translate certain grammatical features of American Sign Language into written English. Specific attention may be placed on the nonmanual aspects of the signs such as raised eyebrows and puffed cheeks which contain important linguistic information.

It is clear that not much is known regarding the manner in which native ASL-signers learn English as a second language. The few examples presented here are grammar-translation in nature and utilize a contrastive analysis approach in dealing with grammatical errors. There is a need to consider other types of language-teaching programs and approaches to errors. Furthermore, the second-language learning process of ASL-using students may best be understood within the context of a bilingual education program which stresses biculturalism as well as bilingualism.

Bilingual Instructional Program

We propose that ASL-using deaf students be educated in a bilingual minority-language immersion program (see the reviews in Baker & de Kanter, 1981; Cummins, 1984; Troike, 1981). This program should be most conducive to the optimal development of ASL (L1) and, subsequently, English (L2). Specifically, the emphasis is on developing and maintaining communicative competence in ASL, and eventually, on teaching English literacy, educational, and cultural concepts.

From preschool to approximately grade 3, all instruction is via immersion in the minority-language, namely, American Sign Language. Since ASL does not have a written component and is a visual-gestural language, educational lessons and activities should be developed to suit the needs and capabilities of the eye. In this view, a wide range of resources can be used. It is important also to establish contact with an accessible community of native signers who can reinforce the students' acquisition.

During the first few elementary grades educational activities are designed not only to present information or real-world knowledge, but also to develop important linguistic and cognitive skills necessary for the later development of reading and writing in English. Activities such as expanding sign vocabulary, answering different levels of questions, and making inferences are

not presented as ends in t emselves but rather as aids in the comprehension of important aspects of a signed story.

As an example consider the following teacher-created story that could be presented in ASL during grade 1:

Story

It is a beautiful, Saturday morning. Jerry thinks it's a good day to read a book. However, he can't decide where to go. Should he go to the library? Should he read at the lake? The river? Well, since he wanted to be outside, Jerry decided to walk down to the river. He knew a perfect spot. When Jerry arrived at the river, he saw a huge tree with long branches hanging over part of the river bank. A great place to sit under and read!

If one of the important sign vocabul tems is river bank, the teacher can elicit from students what they know about this concept as signed in the story. The concept river bank should be discussed in the context of land beside a body of water. Subsequently, other related applications of this concept can be introduced (e.g., lake shore, sea coast).

Higher-level comprehension skills such as answering questions can be handled in a similar fashion. Good questions can enhance the understanding of a story, improve inferential abilities and enrich the background knowledge of the students (Hansen, 1981;

Raphael, 1984). If students are required to answer questions from memory, it may be necessary to present several viewings of stories. As an alternative, the story can be presented once, and students then can look for the answers to signed questions during subsequent viewings.

In reference to the previous story, the following questions can be asked (signed):

1) What day was it?

2) What did Jerry decide to do?

3) Where did Jerry go?

4) Give other examples where land and bodies of water meet.

5) Does Jerry like to read books?

6) Do you like to read books?

7) What else do you like to read?

Some of these questions can be discussed with the students during pre-story activities. The purpose is to activate their background knowledge and prepare them for the story to be presented.

During grade 3 certain signing modifications can be made to help facilitate the transition to written English. Eventually both ASL and written English can be used more or less equally throughout the school day. In relation to reading activities, ASL-using deaf students need to develop bottom-up (e.g., decoding) and top-down (e.g., inferencing) skills. Prereading activities such as

activating background knowledge and teaching vocabulary and comprehension skills are important. These activities are similar to the pre-story activities discussed earlier. Using ASL to explain difficult aspects of the text may be helpful; however, it cannot or should not supplant the actual reading materials.

Summary

There are several important areas beyond the scope of this presentation that have not been discussed, for example, the development of speech and evaluation procedures. The main objective, however, is to argue that the effects of using American Sign Language to develop English literacy have not been empirically demonstrated. It is also argued that the process of learning English by ASL signers can best be understood within the context of a bilingual minority-language immersion program which relies on insights from the research on L1 and L2 reading. Despite the fact that ASL has no written form, it still may be possible for deaf students to develop English literacy skills. Of course, there are differences of opinion. Nevertheless, as stated by Quigley & Paul (1984b, p. 197):

> Given the large body of research and practice with minority hearing children to draw from in establishing ASL/ESL programs

and the probable willingness of...parents to have their deaf children involved in such programs, it should be possible to initiate the programs carefully, evaluate them experimentally, and establish a data base on their effectiveness.

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