

## **YOUNG SIGNING DEAF CHILDREN'S LEARNING OF PUNCTUATION USING COMICS**

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### **Abstract**

The purpose of the study was to explore how young deaf children comprehend English punctuation when reading four single comic panels. Sixteen signing deaf children, ages 8 to 12, were asked to read each single comic panel and to describe what the punctuation grapheme meant. A focus group of five deaf adults who also read the comic panels and described the meaning of the punctuation marks were used as a baseline to score the young children's responses. A test was constructed for this study called the ASL/English PUNC (Punctuation Test). The comprehension of seventeen types of English punctuation and translation of expressive American Sign Language (ASL) in punctuation were analyzed as the children read and signed the passages. Ten levels of English punctuation knowledge were identified. Instructional recommendations and implications are proposed for educators and parents working with signing deaf children.

### **Punctuation and Its Importance to the Reading Lesson**

Punctuation has been defined as the standard marks and symbols used in writing and printing in order to clarify meanings by separating the sentence elements (Dictionary, 2012; Merriam-Webster, 2012; The Free Dictionary, 2012). Punctuation is everything in written language other than the letters, numbers, punctuation marks, inter-word spaces, and indentation (Todd, 2000). Punctuation marks express how the interpretation for different meanings and conveys emotions. When reading printed texts, punctuation is important because these graphic clues signal meaning for not only writers, but for also readers. Punctuation is frequently taught in writing classes but often omitted in the reading classroom. For hearing children, teaching young children how to read with fluency and expression can be accomplished with read-aloud storybook sessions and teachers can explain to the children what the punctuation marks mean and how they be used to bring meaning to the text. When the children read the punctuation marks, they can use them as a road map to reading. Teaching deaf children the meaning of punctuation presents a challenge. These marks or graphemes may appear meaningless unless they are described by the teacher.

### **Reading Fluency And Deaf Readers**

Punctuation is related to reading fluency. Easterbrooks and Huston (2008) developed a fluency instrument for deaf children containing three components: conceptual accuracy, fluency envelope (including elements of signing: visual prosody, i.e. moods, intention and affect; speed, facial expression, body movement, sign space, sign movement, and fingerspelling), and visual grammar (including elements of signing: use of space, role taking, eye gaze, negation, and directionality). They reported this instrument to be useful in teaching reading fluency to deaf children who used sign language.

Another research team, Gennaoui and Chaleff (2000) also addressed the issue of reading fluency with deaf children. Gennaoui and Chaleff (2000) made several adaptations of Miscue Analysis to expand coding systems: a) word segmentation (recognizing root words within the unfamiliar words); b) sign language representation (including fingerspelling, i.e., a name sign or a placeholder for unfamiliar words; initialization; sign choice, i.e., sign concept;

phrase chunking, i.e., sign expression for English phrase; and insertion, i.e., sign clarification); c) ASL sophistication (translation from English print to ASL-like signed expression); and d) voice representations (i.e., some deaf students use their appropriate voice for characters and for meanings) that are suitable for reading behaviors of deaf students. However, Easterbrooks and Huston (2008) study and Gennaoui and Chaleff's (2000) do not address how signing deaf children understand punctuation marks.

## **How Punctuation Graphemes Are Expressed in American Sign Language**

Punctuation can be translated into ASL. In fact, in an overview of early research on ASL and language spoken intonation, numerous studies have shown the similarities between intonation in ASL facial expression and spoken language (Baker & Padden, 1978; Baker-Shenk & Cokely, Bellugi & Fisher, 1972; 1991; Bridge, 2007; Bridges & Metzger, 1996; Fant, 1972; Liddell, 1978; Liddell, 1980; Mayberry, 1979; Stokoe et al., 1965; Weast, 2008; Wilbur, 2000). Mayberry (1979) compared ASL facial expression and the intonation of spoken language. In her findings, she suggested that ASL facial expression, movement, and head and torso shifts express similar meanings as in spoken language (Mayberry, 1979). These aspects of ASL may be used in the teaching of the meaning of punctuation marks with deaf children.

## **Research Design**

Since no research has been conducted in this area, the researcher utilized an exploratory descriptive research design. The dependent variables were deaf children's scores of responses on a test of English punctuation (ASL/English PUNC). The independent variables for the study were the students' demographic characteristics. The research investigated the relationship between the children's performances on the ASL/English PUNC. The study utilized a focus group of five deaf adult participants in order to provide baseline answers to the 17 items on the ASL/English PUNC test.

## **Research Site and Deaf Children Participants**

This focused study utilized a purposive, convenient sample of 16 deaf children participants in this study who attended a school for the deaf in the Midwest. The criteria for selection of participants in the study are the following: 1) prelingual onset of hearing loss at birth or before two years of age; 2) severe to profound hearing loss (ranging from 70dB to 90dB above); 3) have no other diagnosed disabilities other than deafness; 4) ages of 8 to 14 years; 5) 3-7 grades; and 6) use ASL as a primary language.

## **Study Instrumentation**

*Punctuation Sign Test (ASL/ENG PUNC).* It was an instrument that consisted of five one-picture comics with one or two sentences either in a speech bubble, under the graphics picture or both in *The Family Circle* comics by Bill Keane that were used in this study. A total of 17 items of punctuation marks were selected from the context in four one-picture English comic texts for the ASL/ENG PUNC. Seventeen types of punctuation were used through the four pictures of ASL/ENG PUNC: the period, question mark, quotation marks in a dialogue, capitalization of first letter in sentence, statement in the bubble speech within double quotation marks for internal quotation (e.g., the character wrote what he said in an internal quoted sentence), bold, five apostrophes for contractions, two possessive apostrophes, all capital letters in a word, exclamation points, commas, and ellipse.

## Results

### Research question 1

Research Question One queried in general about the knowledge of the deaf children participants on the punctuation test. It was found that there was a wide variance of performance across all children. Some deaf children ( $n = 4$ ) significantly scored higher 82% or above. Five deaf children participants scored 50% or above and more than half of the deaf children participants ( $n=7$ ) significantly scored below 50 percent on the punctuation test. The deaf children participants' ages ranged from 8 to 14, but no developmental trend was found. In other words, as the children grew older, their punctuation scores did not necessarily increase. One child, aged 8, the youngest in the sample, scored 82% correct on the punctuation test.

**Table 1: Raw Scores and Percentages of PUNC-ASL Performance of Deaf Children ( $n=16$ )**

Subject	Age	Raw Score	Percent Correct
#2 (DofH)	8	14	82%
#12 (DofH)	9	10	59%
#8 (DofH)	10	12	71%
#6 (DofD)	10	14	82%
#4 (Adopted DofD)	10	13	76%
#3 (Adopted DofD)	10	12	71%
#14 (DofD/CODA)	10	9	53%
#7 (DofH)	11	7	41%
#16 (DofH)	11	4	24%
#5 (DofD)	11	17	100%
#15 (DofD)	11	6	38%
#11 (Adopted DofH)	12	16	94%
#9 (DofH)	12	7	41%
#13 (DofH)	12	2	12%
#10 (DofH)	13	8	47%
#11 (DofD)	14	8	17%

*Note:* DofH = a deaf child of a hearing adult  
DofD = a deaf child of a deaf adult

### Research question 2

Ten levels of structures from easy to most difficult in punctuation learning were found with the 17 participants.

**Level 1.** Most deaf children participants ( $n=15$ ) made significantly higher correct responses to the easiest punctuation mark on the level 1 that was the apostrophe for contractions of "you are" (you're) (94%).

**Level 2.** The deaf children participants created highly accurate responses with the second easiest punctuation marks on the level 2 that were three types: (a) all capital letters in a word, "HOT" (88%), (b) an apostrophe for a contraction of "do not" (88%) and (c) commas of a series of three or more, i.e., "You have to be quiet at church, libraries, hospitals..." (88%).

**Level 3.** The third easiest punctuation marks on the level 3 were the two types: (a) the period, i.e., "My hands are really clean" (75%) and (b) the question, i.e., "Why?" (75%).

**Level 4.** The fourth level was the capitalization, i.e., "My hands..." (69%).

**Level 5.** On the fifth level, there were two types of punctuation marks: (a) the bolded word, "twenty time!" (56%) and (b) the apostrophe for a contraction of "is," i.e., "The sand's

HOT” (56%). This contraction is unlike the level 1, which was a contraction with a pronoun (i.e., “You’re”).

**Level 6.**The sixth level of easy to difficult was the apostrophe for a contraction of “is” with a person noun contraction of “is” with a person noun, i.e., “Mommy’s on the phone” (50%).

**Level 7.**The seventh level of difficulty was the quotation marks of the dialogue, i.e., “Why?...” (44%).

**Level 8.**On the eighth level, few deaf participants provided the correct responses with the possessive apostrophe, i.e., “teacher’s” (43%).

**Level 9.**The ninth level was the exclamation point, i.e., “Ow! Ouch!...”(38%).

**Level 10.**Most deaf participants made significantly higher erroneous responses on the final tenth level. The two difficult punctuation items were the ellipses, i.e., “You have to be quiet at church, libraries, hospital...”(25%) and the quotation mark signaling a person with a conversation within a conversation, i.e., “You’re to write, ‘I will not hit my sister’ twenty time!” (25%)

### Research Question 3

The four background variables of the children that affected their PUNC test scores were grade level, age of exposure to ASL, parent hearing status and parent signing skill. No development trend in age and performance on the ASL/English PUNC test was found. Some younger deaf children participants at the ages of 8 to 10 scored higher than some deaf older children participants at the ages of 13 and 14. Deaf children participants’ skills of current grade reading level and their scores on the punctuation test were positively related. Deaf children participants who were exposed to ASL earlier, particularly by most deaf parents and by one hearing parent with high signing skills scored significantly higher on the punctuation test. Parents’ sign skills and the scores on the punctuation test were a positively correlated.

### Instructional Recommendations and Future Research

For signing deaf children, providing them with explanations of what the punctuation marks mean in ASL may be best accomplished through explicit instruction. Given the difficulty many of the children had in this study to understand English punctuation, more studies are needed to examine how they learn these English graphemes in other comic texts as well as other forms of storybooks.

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