

Iconicity of American Sign Language to Non-Signers

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Abstract

The element of iconicity in American Sign Language is important for initial learning and retention of this language. Iconicity is the degree to which a sign looks like the word it represents. However previous research has not addressed what makes something appear to be iconic especially to the non-signing community. This study examined non-signers ability to guess basic signs and determined based on the sample population answers, which signs were seen as iconic by non-signing individuals. The study also found similarities among the sample population's answers that suggest a shared idea of iconicity.

Introduction

In an effort to determine which signs are seen as iconic by non-signers the present study was modeled on that used by Thompson, Vinson, Woll, & Viliccio (2012) to assess iconicity in British Sign Language. Previous research looking into the iconicity of American Sign Language (ASL) has shown that iconicity is an important element in ASL acquisition. One study by Griffith, Robinson, & Panagos (1981) had participants, hearing college students and 1st graders guess what a sign meant. The study determined that out of 100 signs tested only a small portion of the signs were high enough in iconicity to be guessed. This however did not have a correlation that explained the high degree of learnability of sign language. So while iconicity is important it is not the largest or only determining factor in learning ASL.

Further research by Beykirch, Holcomb, & Harrington (1990) looked at how well a sign could be learned and remembered by non-signers based on the category of the sign, iconic, or non-iconic. They used interrater reliability by experienced signers to classify the signs in one of the before mentioned categories. Participants were tested 10 days after learning the list of signs and they recalled the iconic signs more often than compared to non-iconic signs. Iconic signs have a better retention rate than non-iconic signs according to this research

The current research question is how well can hearing people with no previous exposure to ASL guess what a sign means? Also this research would like to investigate which signs are iconic? The hypothesis of this study is that some signs are iconic and will be easily guessed by non-ASL users but most signs will not be iconic or easily guessed.

Methods

The participants were students from a large Midwestern university ages 19-24. The sample consisted of 20 participants, 11 males and 9 females who had no previous knowledge of ASL. For the study videos of 50 signs common to ASL 1, an introductory sign class, were compiled into a PowerPoint. Participants were informed that most of the signs were nouns. Using a laptop the participant viewed the 50 signs and they were allowed to view each slide twice. They had ten seconds to write their one word responses for what they thought the sign represented per video. Their age and gender were recorded and the responses were graded. The average participant took 20 minutes to complete the study. Participants did not receive compensation for this study. Materials for this study included a laptop, writing utensil and answer sheet.

Results

The results of this study were that on average the participants guessed the sign or a variant of the meaning 25.2% of the time. The highest was 34% and the lowest was 16%. Some of the signs were guessed correctly more often than chance and those are considered iconic. One example of high iconicity is the sign phone, which was guessed correctly by all participants. The sign moose was close behind with 95% correct rate among participants. Another sign that was guessed correctly often was baseball with an 85% correct rate, the same for ponytail. In contrast some words were guessed incorrectly by all participants. Some examples include apple, tree, bear and socks these would be said to be low in iconicity.

These results were interesting in that the answers were free association meaning participants filled in the blank rather than choosing from a list of words. This provided some interesting parallels between participants in what they guessed. Often when the participants got the answer incorrectly they put some form of verb describing what action the sign looked like to

them. Also there were agreements of 40% or more among participants of what a sign looked like that were incorrect. Some examples of common errors with 40% or higher agreement are cheese, car, cop, golf, coffee and freckles. The answers for the previously mentioned signs tended to be associated with the location of the sign on the body or body part. The sign cheese for example looks like the hands are squeezing something together and the answers reflected this. Also the sign for coffee is two fists with one on top of the other, with the top fist moving in a circular direction, this was often interpreted as grinding. The similar errors suggest a commonality among the participants for what signs appear to mean to non-signers. Also some of the participants tried to take facial cues for the signers as context clues. If the signers eyebrows were down some participants wrote words associated with sad emotions.

Discussion

More background information would be beneficial to participants as often signs are related to one another and once they know what the sign is it makes more sense why it is signed that way. The limitations of this study are that the list of words was not exclusively nouns, only mostly. The sample population is limited to Oklahoma State University, age, gender and ethnicity. The sample was relatively small so it may not be generalizable to the population. The study also relied on participant honesty about previous exposure to ASL. Eighty percent of ASL is based on facial expression, taken out of context without appropriate facial expressions the single sign could make less sense and be harder to guess.

The future implications of this study are that the results can be applied to people wanting to learn ASL as a second language. It also provides insight into which words are thought of as iconic and therefore easier to learn because of the already existing mental schemas individuals may have regarding the signs. The results of this study may be useful to someone teaching ASL as a place where they can start to build associations between the two languages. Future research

could examine iconicity across different languages and cultures as gestures mean different things in different countries. Another direction this research could go is to look at verbs instead of nouns as it seemed participants were more geared to recognize the action over the noun. Also as sign language becomes more popular, parents are now teaching their babies sign language as a means to communicate their needs before they can speak. Another future study could look at the retention of children who grow up learning baby sign and how iconicity factors into it.

In conclusion previous research has investigated how iconicity applies to other topics but has failed to address what makes a sign iconic to the non-signing population. With the results of the present study there can be further research into what shared experiences make certain signs iconic or not.

References

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Correct Incorrect Vocab Word

5	15	backpack
17	3	baseball/bat
9	11	plant/grow
17	3	ponytail
15	5	pray
6	14	pregnant
0	20	socks
5	15	tennis
4	16	window
0	20	tree
0	20	work
0	20	apple
1	19	talk
0	20	ice
0	20	orange
0	20	bear
15	5	food/eat
20	0	phone
0	20	bat-animal
2	18	surf
0	20	melon
0	20	cheese
0	20	fruit
0	20	cop
0	20	firefighter
1	19	cat
0	20	squirrel
0	20	sheep
1	19	smile
6	14	car
0	20	dance
3	17	bird
16	4	bowl
6	14	bowling
1	19	chair/sit
0	20	coffee
2	18	crab
11	9	cup
7	13	key/lock
19	1	deer/moose

13	7	deodorant
6	14	milk
10	10	glasses
6	14	fish
16	4	face
0	20	freckles
0	20	golf
12	8	hair brush
1	19	hamburger
0	20	jacket

The above table lists the number of participants who guessed the vocab word correctly or incorrectly.