## Part 1 Principles of Fingerspelling Transcript

Hello! Are you ready to learn about linguistic principles regarding fingerspelling, how to apply these principles, and why we should use them?

People who learn ASL tend to struggle with understanding ASL fingerspelt words - they often say it is hard to "read" fingerspelling or that they are having a hard time. This problem is a common one. Part of the reason for this struggle is that research shows that most non-native signers assume that spelling belongs to English. With this logic, they then assume that ASL fingerspelling should therefore follow English in that it follows letter by letter with no connection or changes to the handshapes.

However, the truth is that fingerspelling is a part of American Sign Language. ASL has its own linguistic rules and structures. Fingerspelling in ASL is not limited to "simply spelling English letters". You can spell in Latin, Roman, or different languages. For example, people who live in Puerto Rico that use ASL and read or write in Spanish - they use ASL to spell Spanish words. But wait a minute, I thought ASL was supposed to be English only? Then how are people spelling Spanish words using ASL?

Ahh - now that shows us that ASL fingerspelling simply represents Roman letters. With that, language contact comes into play with the deaf community. What individuals use in their daily interactions such as conversations, reading, writing, etc. has an influence on the languages that they use. Regardless of the language of use, you can fingerspell words in any language using signed fingerspelling. In contrast, deaf people who live in the mainland - US - use ASL. Their language of use in society, such as reading or writing, tends to be English. So therefore, it is assumed that their fingerspelling is more English bound. However, ASL itself is a natural language of its own and can be malleable depending on the content and situation, and the language of use.

Now, let's discuss the term "fingerspelling". Should what we do when we use handshapes to represent Roman letters in signed words actually be called fingerspelling? Hmmm. I suspect it shouldn't be. For example, when people whose language of choice is spoken English say words, it is not called "mouth speaking." This act of saying words is simply called speaking. For example, take the name MARY. English speakers simply say "Mary" in one fluid manner, not M. A. R. Y. If you are saying M. A. R. Y., that is considered spelling out the name. Now, in ASL - see how I sign "MARY". I am using one fluid sign to sign "MARY". Now if you are asking me how to spell "MARY", I will slow my signing down to show you M. A. R. Y. See the difference in pace and style between signing "MARY" and spelling M. A. R. Y. This difference in saying a
name versus spelling a name is the same in English and ASL. Then why does English get the credit of "saying" the name while ASL is simply labeled as spelling the name?

No. This mismatch between labeling is not fair. In truth, what we know as 'fingerspelling' is simply sign language in and of itself. This "A" is the sign for the English letter "A", and the same applies for " B ", " C ", and so on. It is quite as simple as that. Nonnative signers need to change their perspective on fingerspelling and sign language.

Now, we often hear "fingerspelling is scary! It is hard." In reality, it is not quite so hard once you accept that "fingerspelling" is actually sign language. We are just taught differently and learned in different ways. Nonnative signers tend to learn "fingerspelling" in a neutral way - S. E. A. N. R. Y. A. N. H. A. U. S. C. H. I. L. D. T. That's my name. Looks simple, right? This manner of spelling my name looks like stamping a card or typewriter keys clanging on the paper. It is not quite pleasant to view. However - ASL has phonological rules that make "fingerspelling" more palpable to the viewer. Now see - SEAN RYAN HAUSCHILDT. See the difference? S. E. A. N. R. Y. A. N. H. A. U. S. C. H. I. L. D. T. This way is not the appropriate way. It feels like such a burden on your hands and arm - ouch! I am feeling some muscle strain right now. If you feel discomfort or strain, that is a sign that you are not signing in a natural manner. Loosen up, learn the phonology rules, and learn how to apply these rules.

To show you these rules, first I will set up a comparison of English and ASL linguistic features. I will give you an explanation of the two. Are you ready?

## Assimilation

Now let's start with assimilation. First, I want to point out that both languages have different modalities. ASL uses the face, hands, vision, space, and different parts of the hands and arms. Spoken language, or English, uses voices - the tongue, teeth, muscles, air, nose, and ears. Now with these two different modalities, how do linguistic features apply to both languages?

Let's take the word "YES". I am sure you are aware that the deaf community has a sign for the word "YES" (repeats YES 4x). However, there is a different rule when you want to place an emphasis on this word. Let's take a look - Y-E-S. (Repeats Y-E-S- 4x). Oh... did you take a look at that "E"? Did you notice the "E"? Aha... it seems the rule of assimilation came into play with that "E". You see the "Y" and "S", but the "E" is barely there. With these phonological rules, you are doing Y-E-S instead of Y. E. S. See, when you do Y. E. S., you are breaking the phonological rules and placing an undue burden on your arms and muscles.

Now, for English - does "YES" fit here? Not quite, so let's take a look at the word "CAN". Why did I pick this word? Let's look at the letter "A". What sounds does it make? Does it make a nasal sound? No? Hmm, interesting. But now in the word "CAN", the letter "A" does have a nasal sound. Think about how you speak it - what happens to the "A"? The "N" comes right behind the "A" and blends into that sound. Interesting!

## Epithesis

Now, there is a linguistic feature where you can add or change parts of the word and still have it make sense. This applies to both spoken and signed languages.

For example, in the deaf community there is a sign for this concept: a plate of bread where you add tomato sauce, cheese, herbs, different vegetables or meats if you desire, then bake it. What is this called? P-I-Z-Z-A. Did the community have a sign for this a long time ago? No. So, it used to be signed slowly but over time, this sign became something different. Now we see the two "Z's appearing together - P-I-ZZ-A. It's different, but you can still notice and identify that there are two "Z"s in this word. My family has a different sign for this, we tend to blend the letters together more, so you will see PI-IZ-A. There are regional differences for this sign, but they still mean the same thing - "PIZZA".

Now, how about for English? What happens when you are thinking, thinking, thinking... and "eurkea!" you have a what? "IDEA". If you spell it, it is spelled I-D-E-A, but when you pronounce it, what happens? Something is added to the end. It becomes "ai-dee-uh".

## Metatheseis

Let's start with an example of metatheseis. Look at how the deaf community signs states, for example - Utah. Look at the "AH" in this sign - "UTAH". Native signers understand this sign, the change in spelling and location did not change the meaning. This specific area of ASL needs more research!

Now for English, this one was a new one for me! Really, I didn't know this. You know that "health" Mexican restaurant where you can place your order at a line? "CHIPOTLE" right? Look at how it's spelled. Now, do you say "CHIPOTLE" with the -TLE? Nope! You say -LTE (-lay, -
ltay). Why the change? The -TLE is not a typical pronunciation sound for English. Changing how the ending of "CHIPOTLE" does not change how people understand what you are referring to.

## Reduction

Typically, people who take ASL 1 classes tend to learn common beginner signs, like animals for example. Let's look at this animal - "DOG". Look carefully at this sign "DOG". People tend to accept that as a sign. "DOG"; "CAT" - that is just how it is signed. However, let's look closely at "DOG". It really is a reduction that has become a commonly accepted sign. Let's look carefully -D-O-G, D-O-G, D-O-G, D-G, D-G, DG, DG. Sometimes these signs become so reduced that it is hard to recognize that these signs really started as a spelled word.

For English speakers, let's take the phrase "I do not know". Over time, a commonly accepted version of this became "I dunno". The words within that phrase became so reduced to simply become "I dunno". The phrase "DoNotKnow" was reduced to "Dunno".

## Elision

We all know that in ASL, there are some signs that may, at first glance, look like fingerspelling. In actuality, they're not simply fingerspelling, but they are an actual sign. For example, lets look at the word BACK. Look cosely, is the -B- there? Seems like it. The-CK- is really clear. Now, how about the -A-? Is it there? No, it's not. The phonological process of fingerspelling dropped the $-\mathrm{A}-$ in BACK.

That's not limited to ASL. For instance, in English take the word gorilla. When pronouncing that word, do you pronounce the $/ \mathrm{o} /$ sound? No. The $/ \mathrm{o} /$ is dropped and instead, you pronounce GRILLA.

Now you see, both ASL and English have the same linguistic processes. We have five different principles, so for those of you who are learning ASL, pay attention to fingerspelling and look at how the different principles appear in different words. When you are noticing those differences, refer back to the five principles for the phonological processes in sign language. You can make parallels to what you know of spoken English to help support that recall process. Next, I will
discuss the different reasons for why each phonological part looks different in sign language.

Are you ready to really take a close look at the ASL fingerspelling phonological process? Are you ready to figure out why people who are newly learning ASL and "fingerspelling" have a hard time understanding native-speed fingerspelling? Why does this group of people seem to struggle to understand fingerspelt words? It appears that many ASL teachers truly do not understand, or even know, the fingerspelling principles. They tend to teach based on the English letter system in that there are 26 letters. While students learn ASL, they tend to do so by learning the English Principles. For example - C-A-T. B-L-U-E. Y-E-L-L-O-W. D-A-N-I-E-L. See how these words were demonstrated? It's like I was spelling in "neutral mode". There were no natural phonological processes involved with my demonstration. Therefore, new ASL learners do not have the opportunity to learn naturally and tend to struggle later when they are in a natural environment. They learn ASL with the mindset that ASL is the same as English in that it is rooted in reading and writing, and they are mentally primed for that. This mindset leads to a struggle in learning and developing fingerspelling skills. Interpreters and teachers for example tend to have an extremely difficult time understanding deaf signers whereas those who grew up with ASL tend to have an easier time since they have internalized these phonological principles. It is the non-native signers who seem to be unable to internalize these principles.

We need to change how we use "fingerspelling" by first understanding the phonological process and breaking away from the mindset that ASL follows the 26 letters of English. This process will break away from the "stamping" or "typewriting" manner of spelling.

Now, we learn about five things: unimorph, synomorph, bimorph, trimorph, and quadmorph. These are different phonological processes that refer to giving meaning to words. These processes shows that while ASL does connect to English, it is not limited to 26 letters. With each 'morph', we actually have many more, possibly 400 to 500 . However, at this time there is not sufficient research on exaactly how many. However, the research we do have has shown that ASL has significantly more letters than English.

## Unimorph

An example of unimorph is when there are phonological features that appear different due to be blended into the previous or future letter. For example, let's look at the letter ' $E$ '. This letter is frequently impacted by different phonological markers. Let's look at the name 'Bette" - look at how the final ' $E$ ' is impacted by the previous ' $T$ '.

Another example is the word 'APPLE'. Here, the 'L' impacts the 'E' that comes after it. When I make an ' $L$ ', my brain is priming the ' $E$ ' to blend into the ' $L$ '. Native signers understand that this "small E" means the letter "E" whereas non-native signers are stuck with the formal "E" and do not understand the "small E".

Here's another example - look at the word 'JUNE'. Now, you will see that this ' $E$ ' is different than the previous two examples. J-U - my 'U' was following the 'J' position. Now my ' $E$ ' is influenced by my ' N '. Blend it together and you have two letters that are influenced by the previous: J-U-N-E. Notice how that appears visually smooth?

Those are all examples of unimorph, where the previous letter has an impact on the following letter and influences how they look - for example, ' $E$ ' and ' $L$ ', and so on.

## Synomorph

Now, we move on to synomorph. This process means that things are happening at the same time, but still clearly recognizable. For example, look at the name 'MIMI.' Did you notice how my ' M ' and ' I ' were happening at the same time? I did not reset my hand from the ' M ' position to move to the 'I'. Let's think of another example. If you have a car, you have to do a certain thing typically every 6 months or so - what is that? An OIL change. Did you notice that? I used the 'O', but then the 'I-L' came at the same time. My 'I' stayed up while my 'L' came up. Moving on - let's think about colors. There's blue, yellow, orange, red, gold, how about silver? Some people use the sign silver, while others use this sign that appears like spelling. Take a closer look - my 'S' and 'I' are happening at the same time, the 'S' stays while the 'I' comes up. SI... L-V-E-R

## Dimorph

The next thing we are learning about is dimorphs, which are phonological movements. For example, a name that many non-native signers tend to struggle with is the name 'CHRIS'. Look at how the ' CH ' is moving while simultaneously happening at the same time, then you have the R-I-S. People who are native signers understand that this movement and blend of letters means 'CHRIS' whereas non-native signers struggle with discerning the ' CH '. There are more examples that are not limited to the 'CH' blend. Take the word 'THURSDAY' for instance. Did you notice the 'TH' there? How about 'WASH'. Look at the 'SH'. Did you see how the 'H' is influenced by the ' S ' there? The ' SH ' happened at the same time with different movements. 'PHONE' - the 'H' happened before the ' P ' was finished. This process is not limited to ' H ' blends, actually. Look at 'FUR'. In dimorph phonological processes, the ' $U$ ' tends to be facing towards the signer, not the viewer. 'FUR', 'COURT', 'FLOUR'. The 'U' is backwards in all of these examples.

## Trimorph and Quadmorph

These phonological processes have very limited research in ASL. One clear example is the phrase 'I LOVE YOU'. We know this as "ILY" sign. The ' $I$ ', ' $L$ ', and ' $Y$ ' happen at the same time, which becomes 'ILY' and is now a common sign... or is it actually fingerspelling? Or both? Take some time to consider that.

For quadmorph, look at the word 'HOOD'. 'DEAFHOOD'. You could use this sign for deaf hood too. However, look at the way I spell 'HOOD.’ This -morph also needs more research.

People who learn ASL as a second language need to pay more attention to how the phonological process for fingerspelling is not the same as spelling words in English, where you are limited to the 26 letters of the alphabet - ABCDEFGand so on to Z. Learners of ASL need to break away from that mindset and recognize that ASL is unique from English and is its own language with its own phonological systems that have no relation to English. Also, because ASL has the word 'American' in it, people tend to assume that it is based on English only, but non-English speakers do use ASL as well. For instance, individuals living in Puerto Rico use ASL to spell non-English words. It is a signed language, but the spelling and such are based on language contact, daily life, daily use, and such. In Canada, there are areas where all reading and writing is done in French, but Deaf citizens there use ASL to spell French words. That doesn't mean they are using French Sign Language.

So in closing, understand that ASL has its own rules just as English does. In English, there are some vocal sounds that simply have no written equivalent, like writing, graphemes, digraphs. For example, /ng/, /ch/, /ck/, /rh/, /ph/, /sh/, /qu/ - when these sounds are voiced, they do not really match what is written. They make different sounds that are unique to the blends. ASL is no different. There are unique phonological processes in both ASL and English. English speakers understand what is being said even when the sound does not match the letters that are written. ASL is no different, and it does not match English. Once you recognize that, and learn the different phonological processes, that will help your ASL receptive skills tremendously. Once you become an interpreter, teacher, or linguist, you will have that "Aha!" moment and understand the signer with less effort. With that understanding, your professional skills will improve.

Now, I am turning this over to Dr. Ashley Greene, who will provide examples using STEM words - specifically words in biology.

