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ABSTRACT

Across the United States, most American Indian children speak English as a first language. This fact allows a unique strategy for teaching an indigenous language as a second language. In all indigenous language programs, formal introduction to linguistics, specifically phonetics and phonology, can provide methods to help children "unlearn" aspects of English that interfere with second-language acquisition. American Indian language programs hope to preserve or revitalize indigenous languages in their original form, and share common concerns related to family dynamics (speaker-nonspeaker interactions), application problems (children practicing the second language outside the classroom using English rules of speech), and the shortage of native speakers as teachers. Introductions to phonetics and phonology can help children discriminate between the sounds of their first and second languages and recognize the phonological rules of the English language that they use every day. A review of the primary stages of first-language production can clarify students' understanding of phonology. In second-language acquisition, children can be confused by sounds, intonation, and stress placements and will often revert to English rules concerning these areas while unaware that they are doing so. Students must understand what sounds from their first language do not transfer into the second, and they must learn to recognize when the first language is interfering with second-language pronunciation. Teaching methods are suggested for readers and nonreaders (preschoolers). (SV)

Teaching Children to "Unlearn" the Sounds of English

Veronica Carpenter

This paper discusses the incorporation of linguistics into an American Indian language program. Second language teachers need to understand the importance of methods and strategies that help students to recognize how the sounds and structure of their first language differ from other languages, especially a tribal language they are attempting to learn. My focus is not on teaching any particular indigenous language or dialect, but on teaching children and adults to recognize how the sounds of the English language interfere with learning the correct pronunciations of sounds in a tribal language they are learning. Perhaps more than children, adults can benefit from this approach because of the unique issues of adult education, such that classes meet fewer times a week and minimal teacher availability. This can result in adult students having more difficulty learning, retaining, and producing new language sounds.

The majority of American Indian children are first language English speakers. English is being spoken in their homes, on the playground, and on television. Only remnants of indigenous language phrases are being carried on, and fewer children have much exposure to their ancestral language. The fact that the dominant language in this country is English and that children from coast to coast are speaking it as a first language can offer us a unique strategy for teaching an indigenous language as a second language. By incorporating a formal introduction to linguistics, we can practice methods to help children "unlearn" English or aspects of English that interfere with second language acquisition. These methods can be shared with all indigenous language programs.

When one learns a second language, the interference between the sounds and grammar of one's first language, usually English in the United States, and the new language hinder progress in learning that new language. There are strategies for children and adults that can enhance language retention and address the problem of how English influences an indigenous language being learned as a second language. The concept of incorporating linguistics in the language class has exciting possibilities because the students become aware of how the brain and vocal tract work together to produce the specific characteristics of their own first language. This technique productively redirects that awareness to facilitate second language acquisition. These methods, as they are implemented and tested, can be shared with all indigenous language programs around the country.

Linguistic application

Linguistics is the study of language, and its four major areas of study are phonology, morphology, semantics, and syntax. This paper examines the importance of incorporating phonetics and phonology into an American Indian language program as the primary linguistic application for second language acquisition. During the past three years, I visited several indigenous language programs, including the Houlton Band of Maliseets in Houlton, Maine; the Western Abenaki Self-Help Office in Swanton, Vermont; the St. Francis Mission School on the Rosebud Reservation, South Dakota; the Northern Ponca Tribe of Nebraska in Niobrara, Nebraska; several families from the Santee Reservation in Nebraska; and the Hocak Culture and Language Center in Wisconsin Dells, Wisconsin. I informally interviewed residents, teachers, administrators, and language center directors. We discussed various issues and concerns surrounding their language programs. Whether the focus was in-place language programs or support for language revitalization programs, the primary concern was for language preservation. The second concern was in preserving the language in its original form. Pronunciation, expression, and grammar are the areas of speech most affected by the influence of a primary language. In my research, there were three common concerns expressed by the people I interviewed.

First, there were concerns about family dynamics. Children are going home and trying to "speak Indian," but they do not speak it well enough to be understood by grandparents. Parents are not fluent speakers themselves and do not know how to address the language barrier. Families become frustrated and confused, and children often refuse to speak for fear of rejection or ridicule. Second, there are application problem concerns. Children are leaving the classroom and trying to produce the indigenous language on their own (whether in reading aloud or play conversation) using the only rules for speech that they know—those for English. Third, are concerns about teacher availability. Adult education programs are being taught by non-indigenous language teachers whose first language is English. The teachers speak with English influencing their intonation, pronunciation of consonant clusters, and stress placement. Students are therefore learning a new dialect rather than the language spoken by their forefathers.

These common problems have been discussed at length within the reservations and tribal offices where I visited. All sites had established or were in the process of establishing indigenous language programs. Representatives of tribes with established language programs who spoke dialects within the same language family supported and encouraged other related tribes who were just beginning their language revitalization program. By sharing their successes and failures, different language programs were able to work to improve the quality of their language instruction.

Phonetics

Phonetics is the study of how speech sounds are produced or articulated in the vocal tract. A simple introduction to phonetics can help children distinguish between the sounds in their first and second languages. By teaching students to identify the parts of the vocal tract such as the tongue, teeth, lips, vocal cords, alveolar ridge, palate, velum, nasal cavity, and so forth, children can identify those sounds in tribal languages that are not a part of the English sound system as well as those sounds that are a part of the English sound system. Even children who are in preschool can learn to identify the parts of the oral cavity as easily as a one year old can identify where the eyes, nose, and mouth are located.

The process of teaching phonetics can be modified in a language program for each level of learning. During the early years of school, the obvious approach would be games or activities. As a child begins to bring reading skills into the learning process, activity workbooks can be applied as a teaching method. By the time a child is at the high school level, a detailed phonetics course could be added to the language program. Why is it important for children to learn about the sound system? Simply put, languages around the globe are different. When a person begins to learn a second language during school years, they will be learning from people who are explaining most of the course or program in the primary language of the student. It is completely natural to let a first language influence the sounds and pronunciation of a second language. The problem is that the speaker is generally unaware that this phenomenon is taking place. This means that we often think we are producing sounds of a language as they are supposed to be pronounced but in fact, we are not.

A well known example of this kind of language interference is how a Japanese speaker will pronounce an English /l/ as /r/. The sounds are not perceived by a Japanese speaker as being different sounds because they do not discriminate the two. Thus, the pronunciation of English words with /l/ or /r/ becomes altered. Other examples of this phenomenon is how a French speaker will pronounce an English /th/ as /d/, or how a Spanish speaker will pronounce an English /v/ as /b/. Once again, these sounds are not perceived as being different by the speaker.

In keeping with language preservation, we must consider the effects that perception can have on an indigenous language if speakers are not formally taught how to recognize and produce those sounds that are not familiar to the English language speaker. For a child who grows up learning only one language, categorical perception of language sounds is limited to the one language thus making it difficult to learn new pronunciations during adulthood. However, children who grow up bilingual or multilingual have a greater range of categorical perception and can learn to speak an additional language as adults with little chance of an "accent" from their native language. Unfortunately, the majority of children in indigenous language programs are indeed monolingual and the adults in indigenous language programs face "accent" problems owing to the influence of English.

Phonologic acquisition

To understand the importance of incorporating a formal introduction to phonetics and phonology in second language acquisition, we can turn to the work of Patricia Kuhl (see Kuhl et al., 1992) at the University of Washington. Her study involves human infants and the critical period in which children absorb and retain the sounds of their environment. When human infants are born, they have the capacity to hear, retain, and eventually reproduce the sounds of speech in their linguistic environment. In other words, it doesn't matter if children are going to be monolingual, bilingual, or multilingual, they are capable of learning whatever sounds they will need to learn in order to communicate in the language or languages of their environment.

In her experiment, Dr. Kuhl tested six-month-old infants to determine if they are drawn to sounds from their linguistic experience. If they were able to recognize sounds within their linguistic experience or sounds in their language environment, it was predicted that the infants would hear and respond to these sounds. Sixty-four infants were tested, 32 in the United States and 32 in Sweden. All components of the experiment remained the same in the two countries. The same computer equipment, experimenters, and speech testing apparatus were used for all 64 infants. Two vowel sounds were used in this experiment. One from American English and one from Swedish. It was predicted that the American infants would exhibit a stronger response for the American English vowel and the Swedish infants would exhibit a stronger response for the Swedish vowel.

The results showed that indeed the infants at six-months-old recognized the sounds from their native language and were drawn to those vowel sounds in their language environment. Their linguistic experience or the language of their environment had altered their phonetic perception. Their categorical perception for sounds needed for communication had already been established. Thus, infants at six months old have already learned and retained the sounds they will need in their linguistic environment. At six months old, children can already identify and respond to sounds within their linguistic experience as those sounds are presented to them. With this kind of information, we can begin to understand how a native language can influence our ability to learn a second language. In other words, by the time a child is in preschool, their language sound system is well in place, which means that second language acquisition becomes a challenge particularly for children who have never been exposed to the second language being learned. Thus, the challenges for adults who are learning a second language, in spite of the commitment to language preservation, become more apparent. Learning to produce sounds in the second language that are not within the sound system of the native language requires years of practice.

Phonology

Phonology is the study of sound patterns in a language. The grammar of language includes rules of phonology that determine how to pronounce sounds to form words. We have already learned that children are able to recognize

sounds within the language of their environment very early in language acquisition. Now we can begin to examine how children acquire those sounds in speech production. By understanding this process, we can learn to design and develop teaching methods giving students concrete information that will help them to be aware of and recognize the phonological rules that they use everyday.

In order to teach native English speaking students about the phonological rules of the English language, it is important to review the primary stage of first language production. A brief review of the one-word stage can assist students in understanding how phonological rules of a first language are initially produced. The following is a study of a 23 month old female subject whose speech production was in the one-word stage. Examples of phonologic production, omission, and substitution give a clear indication that this subject is demonstrating an understanding of phonological rules of the English language. By reviewing the initial stages of language production, students can gain an increased awareness of how native language sound patterns are learned and how they are distinct from other languages. The student can then learn to distinguish sound patterns between first and second languages, thereby diminishing the influence of the first language on second language acquisition.

First, there is the one-word stage. When children are about three or four months of age, they begin to coo and babble sounds. This manner of sound production continues until the child enters the next phase of sound production between nine and twelve months. During this period there will usually be a recognizable rising and falling intonation in the sound production, but the babbling usually remains unrecognizable even to the parents. This does not mean that the child is not communicating with the parents, on the contrary, it simply means that the child is not yet communicating with recognizable speech. By the time children reach their first year, they are usually beginning to utter their first words and enter into the one-word stage. Some children stop the babbling phase when their first words appear, but some children continue to babble with wonderfully expressive intonation. Because of intonation cues, some recognizable sounds, and the one-word stage, parents become fluent in Child-English during the first year of speech production. Children are seldom held back from communicating their desires simply from lack of phrases. However, it does not take long before children demonstrate knowledge of phonological rules in their native language during speech production.

In 1993, I investigated the language abilities of Phoebe, a one year old female, by recording her speech one week before her second birthday. I used spontaneous production with Phoebe because she was very comfortable with me and seemed eager enough to speak freely. The recording was done in her home with her family present. I spent a few minutes asking Phoebe to identify toys from her toy box and then to identify animals from a book in her toy box. She did not know all of the animals from the book though she did repeat some of their names after I recited them. She did not attempt to repeat others such as "giraffe," which I thought might be difficult sounds for her judging by the look

on her face when she tried to say the /j/ sound in "giraffe." Phoebe became bored with this identifying game and began to wander the house, talked to her baby brother for a while, and then went outdoors where she demonstrated her ability to recite one word phrases. This is where the tape ends.

Although she was not able to pronounce all of the English speech sounds, she was very easy to understand. Phoebe substituted the (palatal liquid) /r/ sound for the (velar glide) /w/ sound. This was evident when she identified "wabbit" for "rabbit." She also substituted the (alveolar liquid) /l/ sound for the (velar glide) /w/ sound when using the word "milk" which sounded like "miwk." Phoebe did not produce such sounds as /j/ or /f/ as when I asked her to say the word "giraffe" (Her face looked as though she wanted to try but could not figure the sounds out.). She also did not produce the (voiced interdental fricative) /th/ sound as it was omitted from her words "bathing suit," which she pronounced "bayn zoot" with no "th." Her (alveolar voiceless fricative) /s/ was substituted with a (alveolar voiced fricative) /z/, which was indicated by her pronunciation of "bathing suit" as "baying zoot." She had no problems with nasals or bilabial stops ("mommy," "baby," and "poop" were all very clear) nor did she have any problem with the velar stops, both voiced and voiceless ("go" and "monkey" were very clear).

Phoebe was able to pronounce six of the twelve English vowel sounds and was in the one-word stage. She easily identified many objects with individual words and used many one word phrases such as "no," "uh-oh," "don't," and "yeah." Phoebe's ability to use single word phrases for many different circumstances led me to believe that she was using words that have meaning. I believe that this was not a babbling phase that she was demonstrating. She showed no signs of babbling at all. However, Phoebe did show signs of entering the two-word stage as when she said "baby cute" and "Mommy, bathing suit," meaning "Baby, you're cute" and "Mommy, I want my bathing suit." These were the only exceptions of anything more than the one-word stage. She identified objects with one word, let her feelings be known with one word (no!, Mommy!, yeah!), and called people to come to her with one word.

During this taping, Phoebe did not babble to herself. However, when she did speak she used expected intonation and stresses on her words. She correctly stressed the first syllable of "horsie" and "pocketbook." She raised her voice when she was questioning, lowered her tone when she was identifying objects (declarative), and kept an even tone when she was forceful ("No, don't"). She effectively communicated frustration, anger, command, nurturing, and happiness in the words that she chose and successfully made the transition from babbling to the one-word stage. Her phonology seemed to be normal for her age group, and she communicated with a limited lexicon but effectively and accurately for her needs. This taping seemed to indicate that Phoebe was comprehending speech much faster than she was producing speech. At one week from her second birthday, she effectively used the sounds of her language for communication.

By observing her facial expressions, it was clear that certain sounds were difficult for her and that she had not yet acquired them. However, she knew what sounds were needed for the words she wanted to use and produced a similar sound in their place. This was clear when she used /w/ in (wabbit) for /r/ in (rabbit). As with all language acquisition, it was just a matter of time and practice before she acquired those sounds. Phoebe's language acquisition was far beyond sound production although her vocal tract was not developed enough to accommodate her understanding for the sounds of her language. She demonstrated an understanding of semantics (communicating meaning), pragmatics (conversation), and syntax.

Second language acquisition

As we learned above, an infant's ability to recognize the sounds of the language of the environment happens very early in life. Their ability to produce those sounds becomes apparent within the next few years of life. There are always temporary problems associated with sound production such as loss of teeth and "baby talk," but children establish native language rules of phonology, morphology, semantics, and syntax by the time they are in school. This presents good reason for teaching children about language. Linguistics can provide the tools for helping children to realize what they already know about language.

Language realization is the key to preventing children learning a second language from being influenced by their first language. In second language acquisition, children can often be confused by sounds, intonation, stress placements, and so forth and will often revert to English rules concerning these areas without an awareness that this phenomenon is taking place. There is often frustration, and sometimes classroom withdrawal can develop in second language learning simply because the child is not "getting it" in pronunciation, verb construction, or even just lexical memorization. It is important to teach a child what they do know about language and then help them to eliminate those parts of the English language that do not apply to the language being learned. For example, children know that /m/ does not start a consonant cluster at the beginning of a word in the English language. You cannot use an /m/ with an /l/ or a /g/ or a /k/. Children know this English phonological rule. However, in the Western Abenaki dialect (part of the Algonquian language family) you can start a word with a consonant cluster that starts with an /m/. A word can begin with an "mk" and that is unfamiliar to the English language. In learning Abenaki as a second language, children would pronounce this consonant cluster as "muk" (this is known as a schwa insertion) as English rules of phonology would predict, but the Abenaki word in its original form would be pronounced mmmmk (mmm as in "MMM, that's good!") with a /k/ sound on the end. Because this is an unfamiliar consonant cluster for a native English speaker, the rules of phonology from the English language would alter the Abenaki word from its original form. Thus, indigenous language word pronunciation is altered and influ-

enced by the way children first learned to pronounce the sounds of the English language.

I recently conducted an experiment in which a list of forty Abenaki words were given to native English, non-Indian speakers who were asked to read the words aloud. Most of these words contain such consonant clusters as the "MK" phenomenon, and it was expected that the readers would insert a schwa sound as English rules of phonology would predict. The readings were taped. The schwa insertion and other phonological rules of the English language were used by the subjects as they read the Abenaki words as predicted. The consonant clusters and phoneme placements unfamiliar to the English language were indeed influenced by English phonological rules. This experiment gives support to the realities of indigenous languages (as second languages) being influenced and altered by native language rules. In order to preserve indigenous languages in their original form, students must be taught an awareness for their native language. Students must understand what sounds from their native language do not transfer into the language being learned, and they must learn to recognize when the native language is interfering with the second language pronunciation.

Methods and strategies

In education, especially for our purposes, there are three groups of students to consider when examining methods and strategies: preschoolers, readers, and adults. Preschoolers, categorized as nonreaders, require non-reading or beginning-reading activities and games for second language acquisition instruction. For this purpose, a puppet that I designed specifically for second language learning has been used to help young students learn about the vocal tract. The mouth of the puppet is color-coded for easy identification for both teacher and student. Students learn to identify the parts of the color-coded mouth because they will help the puppet to make sounds in English and in the new language being learned. The tongue is detachable with bits of velcro attached so that teachers and students can manipulate the tongue to those parts of the mouth that it would touch when making certain sounds. Different shapes of lips are also available for the student to choose from and attach to the mouth when making different sounds.

The teacher helps the students identify which sounds in English are *not* a part of the sound system of the indigenous language. For example, the phoneme /a/ in English has many allophones (different sounds for a phoneme), but in an indigenous language there may be only one sound for the phoneme /a/. The students then learn what /a/ sounds are not part of the indigenous language and therefore will not produce those sounds in later years when reading or speaking in the indigenous language.

When students begin to read, other methods can be used that produce the same results. Workbooks can be used for the classroom that have English allophones of the phoneme /a/. For the student's benefit, pictures can be included that have the /a/ sound associated with it. For example, on a workbook

page, students will have between two and four animal pictures to look at. Each animal has a different /a/ sound associated with it, such as alligator and swan. The student then determines which /a/ sound is *not* associated with the indigenous language being learned and will successfully pronounce the second language vowel sounds without English vowel sound influence. Students should be encouraged to create these workbooks in the classroom using characters, animals, or everyday items that are familiar to them. This will help the child to stimulate their imagination in recognizing vowel sounds in any words that they encounter. The inevitable results will be that students will then be able to eliminate English sounds where they are not transferable into the indigenous language, thus preserving the second language sound system.

Conclusion

The acquisition of a second language is highly dependent on the understanding of the student's first language. It is critical to language preservation to explicitly teach students the differences between the two languages being spoken. When children are learning a second language primarily in a school setting, the exposure to that language is minimal and the native language dominating the acquisition of the second language is inevitable. Adult education faces the same dilemma. Incorporating a linguistic background into a language curriculum can eliminate many delays. A simple phonetics and phonology program can give students of any age the mechanics of language production that they need to help eliminate the influence of English as they learn their tribal language. The most important factor is that this method or curriculum, once proven successful, can be utilized by any indigenous language program because it addresses the English language and how to eliminate the influence of English from second language acquisition.

Reference

Kuhl, P.K., Williams, K.A., Lacerda, F., & Stevens, K.N. (1992). Linguistic experience alters phonetic perception in infants by 6 months of age. *Science, 255*, 606-608,

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