



EDUCATIONAL ASSESSMENT & EVALUATION | RESEARCH ARTICLE

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Understanding vocabulary use by Native American students and the relationship with special education

Leslie Costa-Guerra^{1*} and Boris Costa-Guerra¹

Abstract: The Pueblo People of the Southwest face numerous challenges with reference to language issues. A substantial number of Native American students are placed into special education possibly due to different linguistic abilities. The over-identification of Native American students for special education programs may be due to the lack of knowledge as a product of a limited research base on linguistic differences in the English spoken by Native populations. This study examined one aspect of language, oral vocabulary, spoken by Tewa Pueblo children. The goal of this study was to determine whether there were similar patterns in the use of oral language among the Tewa children. The methodology utilized was qualitative narrative analyses based upon interviews, transcriptions, observations, and field notes. The results revealed that all of the participants used a noticeable amount of non-specific vocabulary and required probing to produce specific vocabulary. The implications indicate the need for more research on Tewa linguistic patterns as well as the need for educators to understand such linguistic patterns to better assess and teach Tewa students.

Subjects: Communication Studies; Education; Language & Literature

Keywords: diversity; Native American; assessment; special education; language

ABOUT THE AUTHORS

We as scholars seek to generate inquiry and dialog around the issues of diversity and education. We have researched assessment, technology, language, and communication issues surrounding students who are diverse in the school system. It is our hope that we can reduce biases and unjust practices in education toward students who are diverse.

PUBLIC INTEREST STATEMENT

In education there are still issues of prejudices toward students who are diverse. Although there has been a great emphasis on making education accessible and understandable for all students, there continues to be issues in the way some students, namely Native American students, are assessed and treated. Our research was aimed to understand how Native American students are placed into special education by first understanding how a certain group of Native American students use language. Because language is the basis of all subjects in school, interviews, and analyses were based on the common threads of how these students use language. The research also examined how these same linguistic commonalities could be misconstrued as being a disability rather than a difference.

1. Introduction

There is an overabundance of minority students in special education in the United States. Students from Native American backgrounds make up 19% of students in special education compared to 7% who are from other ethnic minorities (Volante, 2008). The U.S. Census Bureau reported that in 2010, students who are Native American were 96% more likely to be placed into special education as compared to Caucasian students (United States Census Bureau, 2012). Furthermore, 79% of the Native students who qualified to receive special education were classified as having speech and/or language disabilities (United States Department of the Interior, 2013). According to the 2009 New Mexico Annual Performance Report (NMAPR), the reported ethnicity of students who were considered to have a disability is as follows: Hispanic-1472/54.5%, Caucasian-858/31.7%, Native American-288/10.8%, Black-55/2%, Asian-7/1%, and Multi Racial 7/3% (New Mexico Public Education Department [NMPED], New Mexico Public Education Department (NMPED), 2010).

According to the United States Commission on Civil Rights (2007), the African-American, Hispanic, Native American, and Limited English Proficient (LEP) student populations are over-represented in special education. Artiles and Trent (1994) stated that minorities represent a majority in special education. The authors further suggested that there is a need to examine the trend of minority student overrepresentation in special education in order to ensure fairness in assessment. According to Volante (2008), addressing issues of diversity in school systems, especially when it comes to diagnoses, is a challenge but also an opportunity to understand fundamental differences that impact student learning.

1.1. Education issues in the Pueblo community

In New Mexico, approximately 7.5% of Native American students are classified as having speech and/or language disabilities (New Mexico Public Education Department (NMPED), 2010). This data indicates that there is a need to address how language interacts with education for Native American students. Many tribes in New Mexico, specifically the Pueblo tribes, are beginning to address the concerns of language interactions because of the alarming rates of speech and/or language disabilities (Sims, 2008).

1.2. The focus on vocabulary

The assessment of student's vocabulary skills is a typical component of a language assessment. It involves understanding the student's expressive and receptive linguistic abilities through the assessment of the use of key terminology (Cummins, 1980). The difficulty lies with the ability to decipher what language parts are truly deficient and which are merely in transition. For those students who are from diverse backgrounds, many times the development of vocabulary and its use is misunderstood, especially on standardized assessment scores (Damico, 1991). One aspect often documented is the use of non-specific vocabulary.

1.3. Research questions

In order to examine what the linguistic patterns are among Tewa school-age children, this study focused on the use of vocabulary in conversational speech. This study sought to describe the use of vocabulary to understand linguistic patterns for the Tewa students.

The following were the guiding research questions for this study:

- (1) Are there unique pattern(s) of English vocabulary spoken by members of one Tewa community?
- (2) If so, what are the pattern(s)?

1.4. Population of the study

The Pueblo People of the Southwestern United States reside along the Rio Grande River in New Mexico and are descendants of the Anasazi people (Sims, 2008). The name for the Pueblo people

came from Spanish conquistadors who saw adobe dwellings of various heights surrounding a plaza and described them as “pueblos” or villages in Spanish. The Pueblos include Taos, Picuris, San Juan, Santa Clara, Nambe, Pojoaque, Tesuque, San Ildefonso, Cochiti, Santo Domingo, Santa Ana, San Felipe, Sandia, Jemez, Laguna, Isleta, Zia, Zuni, and Acoma. Although each of the Pueblos has varying populations, they comprise a significant amount of New Mexico’s overall demographics. Most of the Pueblos house their own school systems with preschool and elementary services provided by Bureau of Indian Education (BIE), or by the tribe.

2. Methodology

2.1. Participants

There were 20 participants in the study: four kindergartners, one first grader, three second graders, one third grader, three sixth graders, two seventh graders, five eighth graders, and one tenth grader. There were 8 males and 12 females. The mean age was 12 and the mean grade was 3rd. All of the participants were enrolled members of one Pueblo, whose traditional language is Tewa. All of the participants lived on a Tewa reservation at the time of the study, either with their parents or legal guardians, such as grandparents. All of the students considered English to be their primary preferred language used for speaking, but all reported being bilingual or trilingual. A Parent Questionnaire was used to obtain language information including language percentage uses (Table 1).

Only five of the students reported receiving special education services in the past, but were currently not receiving any services. The services were all language related. The socioeconomic status (SES) of each participant was calculated by using The Four Factor Index of social status developed by A. B. Hollingshead to quantify social status (Hollingshead, 1975). Families were primarily living in middle- to low-class socioeconomic circumstances, with a median Hollingshead Index of 54 (Hollingshead, 1975).

Table 1. Student demographics table

| CODE | Grade | Age | Gender |
|------------|-------|-----|--------|
| Student 1 | 2 | 7 | F |
| Student 2 | 6 | 11 | M |
| Student 3 | 2 | 7 | F |
| Student 4 | 2 | 7 | M |
| Student 5 | 3 | 8 | F |
| Student 6 | K | 6 | M |
| Student 7 | K | 6 | F |
| Student 8 | 8 | 13 | F |
| Student 9 | 8 | 14 | F |
| Student 10 | 7 | 13 | F |
| Student 11 | 1 | 6 | M |
| Student 12 | K | 5 | F |
| Student 13 | K | 5 | M |
| Student 14 | 8 | 13 | F |
| Student 15 | 10 | 16 | F |
| Student 16 | 8 | 14 | M |
| Student 17 | 8 | 15 | M |
| Student 18 | 6 | 12 | F |
| Student 19 | 6 | 11 | M |
| Student 20 | 7 | 13 | F |

2.2. Measures

Language sampling is widely recognized by speech-language pathologists as a necessary element for describing children's language abilities correctly (Hadley, 1998). A language sample is usually a recording and analysis of a student's language ability based on either an interview or conversation. In the speech-language pathology arena, language sampling is commonly used to examine language in order to identify children who have a possible language disability that affects learning a language.

2.3. Procedures

Field notes were taken from observations during all interactions with each participant. The observations were done in both formal and informal environments, such as language sampling testing designations and community events. During the actual language sampling sessions, a digital audio-recorder was utilized to ensure that quality and entirety of the interactions were captured. An individual lapel microphone was placed on each participant to ensure quality recordings.

A pre-designated time was set up with the participants' parents or legal guardians for each of the language samples. Each participant was recorded on separate occasions. During the half-hour session, each participant answered some simple questions initially to build rapport and then each participant was shown a series of pictures. The pictures were color photographs of traditional Tewa dances or places. Each of the sessions included a minimum of 100 utterances for analyses, measured by the researcher's online tally marks. An utterance is a spoken word, statement or vocal sound (American-Speech-Language-Hearing Association, 2003). Each participant was asked if he or she felt comfortable expressing ideas about their dances with the researcher. All of the participants verbally accepted because the researcher was Tewa also.

2.4. Inter-rater reliability

The rater who performed the second analyses of the transcripts was a certified SLP who had been working in the public school system for over 20 years. The second rater was provided all of the twenty transcripts independently. Each of the two raters determined which pre-determined category each of the transcriptions fell into and then a percentage of the agreement between the raters was calculated. Results revealed an agreement rate of 90%.

2.5. Systematic analysis of language transcripts software

The Systematic Analysis of Language Transcripts (SALT) Software for fluent English speakers is a language sample analysis measure that captures a speaker's typical and functional language use (Miller & Nockerts, 2011). SALT standardizes the entire language sample analysis process ranging from selecting the sampling context to interpreting the results, thereby providing consistent and reliable measures of oral language (Miller & Nockerts, 2011).

For this study, the SALT program quantified the Type-Token Ratio (TTR) of each student as well the amount of non-specific vocabulary and use of descriptive language. The Type-Token ratio is a measure of functional vocabulary skills. The ratio reflects the diversity of words used by the client during the language sample. Templin (1957) reported that normally developing children between the ages of 3 and 13 years have TTRs of .45-.50. A substandard TTR is one indicator of an expressive language delay or disorder; however, educators must avoid using this kind of normative data as a single or primary method for establishing a diagnosis (Damico & Damico, 1993).

Non-specific vocabulary use was coded in the SALT program and was quantified by calculating the percentage of use in each transcript. According to Damico and Damico (1993), the use of linguistic non-fluencies or non-specific vocabulary should be no more than 20% in school-age students combined. The term "linguistic non-fluencies" is a category of language that includes the use of non-specific vocabulary fillers such as "um" and "ah" as well as normal disfluencies (Damico & Damico, 1993).

3. Results

3.1. Introduction

Narrative analyses were performed on 20 students, who were enrolled Tewa Pueblo members, in order to determine the semantic patterns among the students during spoken English. The participants' ages ranged from 5 to 16. The students were from the grades kindergarten through tenth grade. Every student was first asked if they felt comfortable talking about their Native dances and they all verbally agreed because the researcher was Tewa also. Each student was shown four pictures of Tewa dance ceremonies in various places and asked to describe the pictures. The results are discussed according to the major themes that emerged from the narrative analyses results. The SALT program was then utilized to analyze specific language constructs such as TTR, the use of non-specific vocabulary and the use of descriptions.

3.2. Participation in the research

The goal for the study was to have at least 30 participants including students ranging from 5 to 20 years old. For recruitment, the researcher asked over 60 parents and/or guardians to provide consent for their children. By the end, only 20 parents agreed. At least 10 parents/guardians communicated that they were interested and willing to have their children participate, but when it came to signing the consent form, they did not sign. Many of the families who were open to discussing why they were hesitant to participate made comments such as "my kid is fine and I don't want to scare him/her" or, "the university should study other people." Even after many attempts on the part of the researcher to try to clearly state the purpose of the study and to reiterate that the university was not the researcher, a Tewa woman was the researcher, a majority of the parents and guardians still declined. The lack of participation as a means of relating the researcher to the university relates to the notions of colonization and imperialism because the parents felt like they were being invaded in some way.

There was a situation where one of the parents told the researcher that she was worried about the research because she, "already felt like everyone was against her," but because she knew the researcher's true intentions, therefore, "she was willing to share her children's minds with others."

3.3. Findings

3.3.1. Use of non-specific vocabulary

During the recorded sessions, all of the student participants showed a willingness to answer questions and communicate ideas. Many of the students demonstrated an excited demeanor when talking about the pictures of Tewa dances. Also, many of the students utilized other means of communication when discussing the pictures. For example, all of the participants used pointing, gestures, and interacted with the photographs while discussing ideas. As a part of the use of these communication methods, 100% of the students used non-specific vocabulary for describing nouns or adjectives.

Non-specific vocabulary is defined as the use of vague terminology to describe an object (American-Speech-Language-Hearing Association, 2003). For example, some non-specific vocabulary includes words such as "thing," "stuff," "this," or "that." The reason non-specific vocabulary is a focus in many education curricula is because the use of non-specific words most often leads to a misunderstanding in meaning when speaking. For example, if a person says, "Look there are those things over there?" the interpretation could be whatever the listener assumes the speaker is talking about; however, if the same person says, "Look there are those birds over there?" the message is much more clear.

In fact, the Clinical Evaluation of Language Fundamentals-Fourth Edition (CELF-IV), which is the most widely used assessment for diagnosing language disorders, has one whole section dedicated to examining vocabulary use (American-Speech-Language-Hearing Association, 2003). Likewise,

many state-mandated assessments also have a vocabulary component to examine student language ability (Volante, 2008). As such, all of the student language samples were analyzed for the use of non-specific vocabulary. The Tewa dance pictures were shown so that the images were familiar and relatable to the students' own Tewa world and culture; therefore, less likely to be unfamiliar and increase the likelihood that students would not know the vocabulary (Table 2).

When shown the first picture, a picture of the Tewa buffalo dance at the day school, the students all were able to describe what was happening without the use of any non-specific vocabulary. Most of the students responded to the picture by saying, "That is the buffalo dance," however, when probed further and asked to describe the clothing or background presented in the picture, they used non-specific vocabulary to describe the images. For example, when Student 1 was asked how she knew that the dancers were buffalo she stated, "Because they have those (pointing to head of dancers) on them." When asked, "What are 'those'?" She replied by saying, "Buffalo heads I guess." She was correct in the terminology she used to describe the dancers' headdress, but had the researcher not probed her use of non-specific vocabulary there would have been further confusion about the message being sent. Although the student did point to what she was talking about, on most standardized assessments, pointing is not a credible way to assess expressive vocabulary. Also, on most standardized assessments, probing or re-structuring the questions is not allowed.

Student 2 was similar in how she responded to the first picture of the buffalo dance at the day school. Her first response was, "They are dancing buffalo because I can see that they have these [pointing to picture] things." In response, the researcher stated, "Ok. Pretend I can't see you pointing. What word can you use to tell me what these 'things' are?" The student replied, "Oh um, these are like fluffy and come from buffalo. I think they are just called buffalo heads." Again, like Student 1, she was correct in that she knew what the object was, but used non-specific vocabulary to describe the picture at first.

Table 2. Student language demographics table

| Code | Language self (parent/guardian) | Language spouse | Child language use |
|------------|---------------------------------|-----------------|----------------------|
| Student 1 | English/Tewa | English | English 90% Tewa 10% |
| Student 2 | English/Tewa/Spanish | English/Spanish | English only |
| Student 3 | English/Tewa | English/Tewa | English 60% Tewa 40% |
| Student 4 | English/Tewa/Spanish | English/Span | English only |
| Student 5 | English/Tewa | English | English 90% Tewa 10% |
| Student 6 | English/Tewa | English/Tewa | English only |
| Student 7 | English/Tewa | NONE | English 90% Tewa 10% |
| Student 8 | English/Tewa/Spanish | English/Spanish | English only |
| Student 9 | English/Tewa | Eng/Apache | English 80% Tewa 20% |
| Student 10 | English/Tewa | Eng/Apache | English 80% Tewa 20% |
| Student 11 | English/Tewa | Eng/Towa | English 80% Tewa 20% |
| Student 12 | English/Tewa | Eng/Towa | English 80% Tewa 20% |
| Student 13 | English/Tewa/Keres | NONE | English 90% Tewa 10% |
| Student 14 | English/Tewa | NONE | English 80% Tewa 20% |
| Student 15 | English/Tewa | NONE | English 80% Tewa 20% |
| Student 16 | English/Tewa/Keres | NONE | English 60% Tewa 40% |
| Student 17 | English/Tewa | NONE | English 95% Tewa 5% |
| Student 18 | English/Tewa/Keres | NONE | English 60% Tewa 40% |
| Student 19 | English/Tewa | English/Keres | English 90% Tewa 10% |
| Student 20 | English/Tewa | Eng/Keres | English 90% Tewa 10% |

For Student 3, the results again were similar. She stated, “They’re dancing buffalo” when first asked to describe the picture and when asked, “how do you know that?” she stated, “Um because, [paused 10 s] they have those [pointed to picture].” When the researcher probed further, by asking, “what are those?” Student 3 said, “Um, those are buffalo, um [paused 5 s] heads.” It appeared that even though the student knew the correct terminology for the buffalo head, she first used non-specific vocabulary by using the word “those.”

This same pattern emerged at least three times each with every single student who participated in the study. The following are the direct quotes from students that showed how they used non-specific vocabulary during the sessions with the researcher (Table 3):

Student 1

Because they have **those** [pointing to head of dancers] on them.

Yeah [paused 7 s] ... The girls are wearing **those** dresses [pointing to picture] and the boys are wearing **those** skirts [pointing to picture].

They are wearing **those** and **those** and **those** [pointing].

Well [paused for 8 s], they have **those things**, I mean, they have um, [paused for 5 s] feathers too.

Well [paused for 3 s], these dancers have **those** [pointing to picture], um, **those**, um **things** ...

Table 3. Socioeconomic demographics table

| Code | Highest ed self (parent/guardian) | Highest ed spouse | Occupation self (parent/guardian) | Occupation spouse |
|------------|-----------------------------------|-------------------|-----------------------------------|-------------------------|
| Student 1 | GRAD | BACH | Teacher | Afterschool Coordinator |
| Student 2 | HIGH | HIGH | Accounting | Unemployed |
| Student 3 | HIGH | HIGH | Casino | Casino |
| Student 4 | HIGH | HIGH | Accounting | Unemployed |
| Student 5 | GRAD | BACH | Teacher | Afterschool Coordinator |
| Student 6 | HIGH | HIGH | Clerical | NONE |
| Student 7 | HIGH | HIGH | NONE | Casino |
| Student 8 | HIGH | HIGH | Accounting | Unemployed |
| Student 9 | GRAD | BACH | Unemployed | Professional |
| Student 10 | GRAD | BACH | Unemployed | Professional |
| Student 11 | HIGH | HIGH | Casino | Casino |
| Student 12 | HIGH | HIGH | Casino | Casino |
| Student 13 | HIGH | COMM COLL | Administrator | NONE |
| Student 14 | HIGH | HIGH | Manual work | NONE |
| Student 15 | HIGH | HIGH | Manual work | NONE |
| Student 16 | HIGH | HIGH | Tewa teacher | NONE |
| Student 17 | HIGH | HIGH | Secretary | NONE |
| Student 18 | HIGH | HIGH | Tewa teacher | NONE |
| Student 19 | HIGH | HIGH | Clerical | Casino |
| Student 20 | HIGH | HIGH | Clerical | Casino |

Student 2

They are dancing buffalo because I can see that they have these [pointing to picture] **things**.

Well like because you can see this **thing** here, um, [(paused 6 s), this portable is at the day school [pointing to picture] but it looks different now. And even because you can see **these** [pointing to picture] um, chairs and **stuff**. We don't have **those** anymore.

The buffalo dancers are dressed different because they have more **stuff** on.

[Paused 10 s] yeah, the girls have **those** [pointing to picture].

And um yeah [paused 5 s] the girls also have **these things** [pointing to picture].

And they have [pointing to picture] **these**.

Student 3

Um because, [paused 10 s] they have **those** [pointed to picture].

Because, um, [paused 6 s], this **thing** is here...

He has those **things** [pointing to picture].

Because there are **these** [pointing to picture] and **those**.

Um, he, like um [paused 7 s] has **these** [pointing] and um they like make noise.

Because um they like um have these fluffy **things**

Um the dancers have different um **these** [pointing].

Student 4

Trees and um, other **stuff**.

and to pray to get **stuff**.

Oh cause **this** one [pointing] has feathers and this other **stuff**.

Because I can see **these things** [pointing].

They have **those** [pointing].

They have like **those things**...[(paused 10 s) sticks.

Well um like there is **this stuff** all over.

Student 5

That plants have to have water, and sun and other **stuff** to grow.

Because they have long hair [pointing] and they have the um feathers [paused 7 s] and they have **those things** that go around their head like **that** (motioning to circular motion around head).

Um because the um the deer have long horns and the buffalo have like a **thing that** goes

down here [motioning to self on the back].

And um for the legs, [paused 6 s] they have **those ones** [pointing].

Because I knew more about the people and dances and **stuff**.

Student 6

Because they have **those things** [pointing].

Um [paused 17 s] um **those** are **those** um buffalo heads.

I like to eat **those things**... um [paused 8 s] **those** round **things** and they can have ketchup.

There are **those** people [pointing] who watch the dance and then there is more people who dance the dance.

Student 7

Um cause they have their dancing **stuff** on.

Um they have **that** on [pointing].

Cause they have **these** [pointing]

I see **these** guys [pointing].

Cause they have bells on and they have these um **things**...

Ok um they are dancers and they have antlers and then they have their um [paused 7 s] their um corn **things**. And they have their **things** right here [pointing] um moccasins and they have shirts and their **thing** [pointing].

But he likes boy **things**.

Student 8

The men are wearing **those things** [pointing] and the girls are wearing a dress.

And they have **those** shirts [pointing] and moccasins.

Um [paused 7 s] they have a cane and like they have antlers and they have **these** on their heads [pointing].

And um we have **those things** [pointing].

Student 9

Um they are not wearing the shells or the **things** [paused 7 s] the white belts.

Because of all of this **stuff**.

There are a lot more deer and they are wearing white shirts and um (paused 8 s) there are **those** again [pointing]...

Um usually I go on **those things** and play basketball.

Student 10

And they have an um, an um [paused 5 s] **those things** on [pointing].

Oh and they have **those things** in their hands [pointing].

Oh and um they have on **these things** too [pointing].

Or they don't have the same head **things** on.

Just that they have **those things** right there [pointing]...

I can see **these** over here [pointing].

And they have **these** [pointing] um **these**...um.

And um **these ones** have **those** different **things** too.

Student 11

Playing with **this**.

Cause um they have **those things** [pointing]!

There are **those** other **ones** too!

Um they have **these things** [pointing].

And um [paused 7 s] they have **these** different **things**!

Oh and **these** [pointing].

Oh and um they have **these things** on!

Yeah um you can see **that part** [pointing].

Yeah um I have **those** and **those** and **these things** [pointing]

Um [paused 12 s] [picked up picture] oh um I see **these things** over here [pointing].

[Paused 6 s] oh um cause they have **these** [pointing] **things**!

Student 12

Um [paused 8 s] cause he has **this thing** on [pointing]...

I see **these** [pointing].

Cause I can see the big **things** to see outside where we read!

Um cause their all this **stuff** everywhere [pointing].

Student 13

Um **these** guys [pointing] are singing.

Um [paused 6 s] because they have **this** [pointing].

Cause um [paused 7 s] there are **these**[(pointing)] and **those**.

Um ok well [paused 7 s] they have **those** and **those** and those....[pointing]

Oh um they have **these** [pointing])

Student 14

Um [paused 9 s] well the dancers are wearing buffalo **things** and the singers have drums.

Well um the guys have **those things** too [pointing].

Um the girls have different **thingies** here [motioning to head]

Well um I get to go places and do my homework with other people and even I get to learn new **things** from new people.

Student 15

Um [paused 7 s] we are learning how to inlay stones and um [paused 5 s] and how to use all of the **things**...

Well [paused 6 s] because you can see **these** [pointing].

Well um [paused 6 s] the dancers have the head **things**...

And **these** ones [pointing] are dressed different on top.

These ones [pointing]!

Um yeah **these** [pointing].

Um they have the same as deer except for that they wear **these things**(paused 8 s) that um go over their body.

Yeah. I like like learning about different **things**.

Student 16

Yeah, and is it a horn **thing**?

They have their **things** on [pointing].

Um you see this **thing**.

Student 17

Because the guys have a buffalo head and they girls have **those** on their heads [pointing].

They have mantas, and rattles and **those** [pointing] **things** and the deer have sticks and antlers and quilts.

They are wearing the feather of the **stuff**.

Student 18

Because of the **stuff** um I mean the clothing.

[Paused 8 s] Cause the plaza doesn't look like **this** [pointing].

Well um because they have these **things** [pointing].

And the houses surround **it** [pointing].

They are wearing those head **things**.

Student 19

These ones [pointing] are singing.

Um the guys are wearing buffalo heads, and feathers and **those things** that go on their legs [motioning to legs]....

Um I think they are **there** [pointing].

Cause there is **this stuff** everywhere [pointing].

Student 20

Um cause you can see their buffalo **things**.

Ok um [paused 7 s] they have **these things** and their dresses and moccasins and feathers.

There are **these** guys [pointing].

Table 4. Use of non-specific vocabulary for nouns and adjectives

| CODE | Noun replacements (%) | Adjective replacements (%) |
|------------|-----------------------|----------------------------|
| Student 1 | 97 | 3 |
| Student 2 | 95 | 5 |
| Student 3 | 97 | 3 |
| Student 4 | 99 | 1 |
| Student 5 | 98 | 2 |
| Student 6 | 93 | 7 |
| Student 7 | 99 | 1 |
| Student 8 | 98 | 2 |
| Student 9 | 96 | 3 |
| Student 10 | 95 | 5 |
| Student 11 | 97 | 3 |
| Student 12 | 99 | 1 |
| Student 13 | 100 | 0 |
| Student 14 | 99 | 1 |
| Student 15 | 97 | 3 |
| Student 16 | 95 | 5 |
| Student 17 | 96 | 4 |
| Student 18 | 100 | 0 |
| Student 19 | 98 | 2 |
| Student 20 | 97 | 3 |
| Average | 98 | 4 |

Table 5. The SALT data results

| Student | Use of non-specific vocabulary | Use of descriptions | Type token ratio |
|-----------------|---------------------------------------|------------------------------|-------------------------|
| Norms | >20% | No normative data (%) | 0.45–0.50 |
| Student 1 | 34 | 24 | 0.29 |
| Student 2 | 22 | 23 | 0.32 |
| Student 3 | 29 | 21 | 0.31 |
| Student 4 | 25 | 20 | 0.36 |
| Student 5 | 23 | 10 | 0.37 |
| Student 6 | 20 | 11 | 0.40 |
| Student 7 | 26 | 13 | 0.33 |
| Student 8 | 21 | 17 | 0.35 |
| Student 9 | 20 | 20 | 0.41 |
| Student 10 | 27 | 25 | 0.34 |
| Student 11 | 32 | 30 | 0.28 |
| Student 12 | 27 | 25 | 0.30 |
| Student 13 | 27 | 20 | 0.34 |
| Student 14 | 28 | 25 | 0.37 |
| Student 15 | 30 | 19 | 0.41 |
| Student 16 | 20 | 28 | 0.39 |
| Student 17 | 29 | 20 | 0.35 |
| Student 18 | 28 | 17 | 0.36 |
| Student 19 | 30 | 20 | 0.32 |
| Student 20 | 33 | 16 | 0.30 |
| AVERAGES | 27.55 | 20.2 | 0.345 |

Um cause I can see these big windows and **those things** on the roof.

Oh and my Mom wanted me to give you **this**.

The results demonstrated that the students who participated in the study used non-specific vocabulary when speaking. All of the participants used non-specific vocabulary more than 20% of the time. The transcripts showed that the students consistently used non-specific vocabulary most often to replace adjectives and nouns. Also, the transcripts showed that the students utilized pointing and gestures consistently when describing the pictures. The students would either point or demonstrate behaviors when they used the non-specific vocabulary and the students used gestures in conjunction with the non-specific vocabulary as an aide to communication. As noted earlier, in most standardized assessments, pointing is not an acceptable demonstration of expressive vocabulary. Table 4 shows the number of times each student used non-specific vocabulary to replace nouns vs. adjectives in the 100-utterance sample.

It must be noted that Student 16 utilized the most Tewa words in his description of the pictures. His guardian is a Tewa teacher and reported that they use Tewa in the home. Because of his reported comfort level with Tewa, the researcher told him if he would rather use Tewa to talk about the picture that was acceptable. He had the fewest uses of non-specific vocabulary possibly because he would use Tewa words when he did not have a word to use in English.

At this time, there are no standardized assessments that consider the use of Tewa words to be an acceptable language to examine vocabulary repertoires. The reasons for the lack of knowledge

about Tewa could be due to the lack of research surrounding Tewa, the lack of people who speak Tewa, and also because of the guarded nature of the Tewa communities.

Although the participants used non-specific vocabulary throughout the transcripts and some of the communications may have initially appeared to be confusing, when probed or cued, the students were able to provide the appropriate vocabulary in English for which they originally used non-specific vocabulary (Table 5).

4. Conclusions

4.1. Summary of results

The following were the guiding research questions for this study:

Are there unique pattern(s) of English vocabulary spoken by members of one Tewa community? If so, what are the pattern(s)? The results that emerged from transcripts were as follows: All of the students utilized a noticeable amount of non-specific vocabulary when describing the pictures of Tewa dances in various places, and when asked to clarify, the same students were able to provide specific target vocabulary. The researcher probed the students by either asking further questions or by providing leading statements. The students also used descriptions more than 10% of the time in their language to describe vocabulary. A majority of the students reported using English as the primary means to communicate; however, several of the students used Tewa words in conjunction with English. All of the homes reported using at least two languages.

The impacts of the Tewa language on the spoken English of Tewa students are unclear but definitely present. Even though all of the students either self-reported or the parents reported that they spoke English primarily, all of the homes were either bilingual or trilingual in nature. Many assessments and even interview protocols ask parents and/or students about the presence of another language in the home for considerations in language ability, but many do not consider biculturalism or triculturalism a concern for language. In the Tewa community, because the Tewa language is ingrained into the culture and ceremonies, it is difficult to separate the language from culture; therefore, the term bicultural or tricultural in the Tewa community defines the use of different languages in many facets of life.

Although there are no standardized assessments that examine language ability that use Tewa words or cultural pictures, current assessments must be viewed as merely a tool for discovering patterns. Because Tewa words do not translate into English well and vice versa, there must be some exceptions to how Tewa students use vocabulary.

4.2. Possible reasons for results

There may be several reasons why Tewa students utilize non-specific vocabulary in spoken English. Furthermore, there may be several reasons why these same Tewa students were able to provide the specific terminology when asked for clarification by the researcher. Because Tewa is highly guided by non-verbal cues, many Tewa people, even if they are not fluent in Tewa, speak English using a noticeable amount of gestures. The results from the parent/guardian survey showed that all of the homes of the participants were bilingual and bicultural. Even though the parents/guardians may not consider themselves or their children bilingual, the entire Tewa culture is based upon the Tewa language. It is impossible to separate language and culture in for the Tewa people.

Tewa is descriptive in nature. Many Tewa words describe objects and do not name objects. For example, even Tewa names are descriptive of places or animals. Many Tewa words such as the word for car, which translated means “wind wagon,” are based on the premise that the description of the item is far more communicative than a name. In 100% of the students’ responses to the researcher, the students were able to describe the objects that they were discussing, and then were able to

provide the specific vocabulary. The clarifying questions functioned as leading the student's thoughts from descriptions to actual vocabulary.

Many Tewa words do not translate well into English. For example, a word known as "wi sigi" would translate loosely to "love" in English. But in Tewa, "wi sigi" means much more than love. It involves aspects of respect, admiration, and connection. All of the homes in the study were bilingual or trilingual with all homes having Tewa usage. Because many of the Tewa students come from a foundation of Tewa speakers in the home, it is difficult for Tewa speakers to translate meanings. For example, much of the vocabulary used in English is simply not present in Tewa and vice versa. This lack of translation from English to Tewa then creates a type of barrier between the languages. How can a student be asked to name vocabulary that is present in their Tewa vocabulary but not in English or vice versa? This transference can only lead to non-specific vocabulary use as a first means of description until both linguistic foundations can merge. Most state and national mandated standardized assessments do not take this complicated linguistic interaction into consideration.

Many Tewa people speak a form of Native American English, which was described in detail early in the literature review. Although, prior to this study, there were no studies done about the specific way Tewa speak English; many Tewa people speak English in such a way that they can be identified as being Tewa people simply by the way they speak. It is possible that if the entire community speaks English with the use of non-specific vocabulary because of interactions between Tewa and English, the younger generations would also speak in a similar fashion. In this study, there were no differences depending on age or grade, which contributes to the ideas that all Tewa students are using a similar way to speak English. The foundations for learning English are probably introduced by Tewa speakers; therefore, the students most likely represent their home language influences (Sims, 2008; Suina-Lowery, 1979; Villa & Villa, 2005; Volante, 2008).

Because the students were able to connect a vocabulary word with the non-specific vocabulary word with probing, it is highly unlikely that they are disabled in language ability. If anything, the results of this study showed that Tewa students do know specific vocabulary when probed. Many assessments that are used to analyze language ability for diverse students do not take into account bilingualism and especially do not recognize biculturalism as a factor for communication results (Volante, 2008).

According to Labov and Waletzky (1967/1997), Villa and Villa (2005), as well as Sims (2008), indicating unique linguistic features in a group of people involves finding unique linguistic cues among a diverse group of participants from the same cultural group. Although this study only focused on school-aged students, the same unique vocabulary use discovered in this study may be present in the whole community. Children often reflect the language use of their homes (McCarty, 2008). If this notion is discovered to be true, there is a high probability that these same unique patterns present in the participants are also present within the rest of the community.

4.3. Significance of research

Cultural imperialism has led to the over identification of Native students in special education because of the use of standardized approaches that are biased to Native students. The results indicate a need to test with other measures or in a variety of unstandardized ways such as dynamic assessment. The results of the research revealed the need for dynamic assessment when examining the language ability of Tewa students. According to American-Speech-Language-Hearing Association (2003) dynamic assessment is "a method of conducting a language assessment which seeks to identify the skills that an individual child possesses as well as their learning potential. The dynamic assessment procedure emphasizes the learning process and accounts for the amount and nature of examiner investment. It is highly interactive and process-oriented" (p. 5). In dynamic assessment, the examiner conducts interviews, language samples, and other means of understanding language ability beyond a standardized assessment. In fact, the types of questions asked when the students were asked to clarify their responses could be viewed as dynamic assessment. As such, students

were able to show their expressive vocabulary in a way that would not be possible with strict adherence to a standardized assessment.

The results of the study also demonstrated the need for an understanding of the relationship between language and culture. Even though all of the students felt comfortable speaking about the Tewa dance pictures, non-specific vocabulary was still present. Now, if these same students were provided pictures that were unfamiliar, the use of non-specific vocabulary may have increased because of the lack of knowledge or background about the pictures being shown. For example, there is a picture on CELF-IV assessment that shows a scene in a city where people are walking on the street and there are tall buildings and traffic lights. Considering that most Tewa communities do not have these features in their environments, asking a Tewa student about such a scene and expecting to gain knowledge about vocabulary and language use may guide poor results. In the student transcripts, all were able to describe the scene of dancing in the plaza with probes because they were familiar with the cultural and social expectations of the picture. These results of the study have several implications for educators.

There is a need for further work and research to establish the unique linguistic patterns among the Tewa people. Further research should be more extensive to examine various ages among the Tewa. Also, further research should examine a range of aspects of language such as morphology, syntax, and phonology. The need for the extensive research in the area of Tewa linguistic patterns is crucial to understanding whether the patterns in this study truly reveal patterns of a unique dialect.

4.4. Implications for educators

The following are issues for educators to consider when working with students from a Tewa background:

Community Considerations

- (1) Many older generations still speak Tewa fluently and predominantly, and in many cases, it is the older generation that is raising the students we see in classrooms today.
- (2) Many homes in which Tewa students reside are bilingual and trilingual in nature. Just because a student or parent/guardian reports that a student speaks primarily English, try to understand the relationship between how close language and culture are for Tewa people.
- (3) Many Tewa people are not against education, and in fact encourage education, but may not openly discuss their child's Tewa language ability because of the idea that Tewa is cultural and speaking about culture is taboo.
- (4) Most Tewa communities are losing their language, and even though there have been introductions of Tewa language restoration programs, Tewa is a language in transition. Because the older generations speak it fluently and the younger do not, there is a kind of language shift emerging that contributes to the emergence of unique linguistic patterns in spoken English.
- (5) The Tewa tribal council is still the governing body, and if there are questions or concerns, it is crucial to include their knowledge and understanding in the process to a certain extent.
- (6) If invited, try to attend Tewa community events to further understand the language use in the community. Many times, when observed, an educator can determine language patterns in general just by listening to the community "Puebloan English."

Remember that although many Tewa communities are similar, they are still very unique. These considerations are merely a guide for interactions with Tewa communities in general. Because all Tewa communities share a common thread of language loss and the crucial demand of language on culture, educators must define the specific community need on a more individual basis.

Student Considerations

When working with Tewa students, there are some considerations that educators should be aware of:

- (1) Tewa students are often reserved. It is not unusual to go minutes without hearing a spoken word from a Tewa student. This “shyness” is normal in the community as Tewa people are taught to learn through observation. The transcripts show how often pausing was utilized. Be careful not to judge the pausing in spoken English as a deficit. Further research is needed to understand the intricacies of pausing for Tewa students.
- (2) When at all possible, try to interview the Tewa students and/or guardians to understand how language is used. It is mandated to provide standardized assessments to all students, but consider the results in comparisons to your own observations and interviews. Also consider modifying the assessment to allow for scaffolding such as the researcher did in this study. If modified, the normative data cannot be used but the normative data is probably not appropriate to use with Tewa students in any case. Instead, a rich description of the whole language interaction would be preferable.
- (3) If you discover that the Tewa students you are working with do use a noticeable amount of non-specific vocabulary, try to encourage vocabulary stimulation in the following ways:
 - expand on the child’s thoughts with questions or leading statements;
 - consider the background of the student and their familiarity with the subject being discussed;
 - ask the student if they would prefer to use another language to describe the object;
 - allow the student time to respond to your probes;
 - and, remember that because Tewa is non-verbal in nature, try to observe their gestures and non-verbal cues.
- (4) Real-life contexts are usually more relatable for students, so try to use pictures, drawings, art, and visuals that are in the Tewa students’ environment. Once a foundation for everyday vocabulary is established, then it is plausible to introduce expansive vocabulary.
- (5) Be understanding that there is a cultural calendar. There were many weeks that the researcher could not contact parents/guardians because of cultural community events. Many Tewa students still participate in all community cultural events. This cultural calendar is often annual and predictable so that it is possible to understand when a student is missing school for cultural events.
- (6) It is still taboo for Tewa students to discuss some cultural events with people who are not from the community. Please respect secrecy as a means for traditional preservation and not as barrier for language.
- (7) Try to network with other professionals who have worked with Tewa students, especially professionals who are Tewa themselves. By collaborating, it is more likely that these people know of assessments or tools that are appropriate to use with Tewa students.
- (8) When at all possible, be persistent but not aggressive. Do not take the lack of communication by students or their guardians as a lack of understanding or care. On the other hand, pushing too much can turn a student or family away. There is a delicate balance between assertion and aggression for many Tewa people.

4.5. Implications for future research

The implications for future research involve a further and deeper understanding of the patterns in language use among Tewa students. This study only examined the vocabulary patterns among the participants; however, there is a need to examine the other aspects of language patterns such as the syntactic, morphological, phonological, and especially pragmatic language patterns because of the effects of non-verbal cues on language in Tewa communities.

Because the Tewa language is being lost, many younger generations do not speak Tewa fluently even if their parents and guardians do speak Tewa fluently. This shift in language ability among the generations may be a clue as to how students are speaking English. This study examined school-age children only. Further research may extend the research to examine all ages of Tewa speakers so that comparisons can be made in terms of language ability in different generations as well as the importance of Tewa influences on English.

Currently, research is still an issue that needs to be understood as a means to develop and learn about Tewa communities. In order to not function as a mode of destruction, future research must carefully consider the needs and desires of the community itself. Only through the results of positive research studies will the barrier of research among the Tewa and other Native American communities diminish. One way to accomplish this goal is to help Native American students succeed through education so that they themselves can be the researchers who produce positive outcomes for their communities.

Because of the unfortunate history that Native people have endured, there may never be enough research to fully understand the complexities of language, culture, and special education. Cultural imperialism has impacted the interactions of Native people in today's society and in education. This study is only a piece of the research needs that impact Native people.

4.6. Limitations

The limitation of this study is that the research only examined one element of the language system for Tewa students. Vocabulary was the focus; therefore, other linguistic systems such as syntax, morphology, and phonology were not examined. Also, because the study focused only on vocabulary, the finds of pausing and other pragmatic language interactions were not fully explored. Also, there was a wide range of ages in the population of this study, and the influence of the student's age was not specifically examined.

The implications provided from this study were not all directly delineated from the results, but were a combination of implications obtained from literature research results, personal cultural experiences, and communication interactions. Further research needs to address more in depth the noticeable pausing phenomena among the Tewa students, the other linguistic systems such as pragmatic language as well as cultural language transference issues.

4.7. Final thoughts

Language is like a beaded medallion: full of complex weavings and beautiful colors and designs. In order to completely understand how language impacts Tewa people in education, educators must be willing to view the beauty and complicated detail. Just like a woven object, the overall product cannot be sustained without many different parts coming together to create a strong solid production. This study is only a small piece of the work that needs to be performed to understand the linguistic patterns of Tewa people. Just like beading, research aimed at understanding the language of Tewa people is worthy of artistry and skill.

Although research is still taboo for many Native American communities, positive outcomes from research, such as this study, will help to diminish the hesitancy of Native communities to be open to learning about how our people and culture interact with the world around us. The researcher comes from a history of people who loved to bead. Beading itself requires the ability to take different entities and connect those parts with a strong idea of an end product. And so goes the hopes for connecting education, research, and Native people to ensure a strong, beautiful future.

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