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Early Literacy Abilities in Spanish-English Emergent Bilingual Children from Varied Dialectal Backgrounds

Antonietta Mastrota

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Early Literacy Abilities in Spanish-English Emergent Bilingual Children from Varied Dialectal Backgrounds

by

Antonietta Mastrota

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science Department of Communication Sciences and Disorders College of Behavioral and Community Sciences University of South Florida

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Abstract

The Hispanic population within the United States has grown to a considerable amount. The state of Florida’s population is 25% Hispanic, with projected estimates of this population continuing to grow in the coming years (Ortman & Shin, 2011). Statistics show that 28.3% of the state’s population, over the age of five, speak a language other than English at home. With this considerable number of Spanish-speakers comes the responsibility to adjust certain educational practices to best meet their needs. Literacy is an essential part of learning, and therefore assessing early literacy is an essential part to any child’s academic development.

Phonological awareness is the ability to manipulate and identify the phonological segments of a word (Blachman, Tangel, Ball, Black & Mcgraw, 1999). It is a strong predictor for early literacy abilities (Bradley & Bryant, 1983, Kozminsky & Kozminsky, 1995, Vandervelden & Siegel 1997). This relationship between phonological awareness and early literacy exists within the English language, and also within many other alphabetic languages such as Spanish (Anthony, Williams, McDonald, Corbitt-Shindler, Carlson, & Francis, 2006). Therefore, phonological awareness shares an important relationship to early literacy abilities for both English and Spanish speakers.

There are many morphological, phonological, syntactical, and lexical subtleties that exist between varied dialects of the Spanish language. Vocabulary and lexicon use has been shown to positively influence phonological awareness skills in young children. Dialectical classifications of the participants were determined through use of different dialect specific vocabulary word list in the Linguistic and Cultural Background Survey. This study sought to evaluate whether
dialectical differences among young Spanish-English bilinguals were associated with performance on measures of phonological awareness and reading.

Twelve participants (children ages 3.17 years to 7.5 years and their parents participated in the study. Children completed a short form of the dynamic assessment of phonological awareness in Spanish (Loreti, 2015), the Letter-Word Identification of the Woodcock-Muñoz Language Survey-Rev (WMLS-R; Woodcock et al., 2005), the Elision, Rapid Automatic Naming, and Letter Name/Letter Sound subtests from the Test of Phonological Sensitivity in Spanish (TOPSS; Brea et al., 2003) and the Preschool Language Scales, Fifth Edition Spanish Screening Test (PLS-5; Zimmerman et al., 2011). Parents completed a Linguistic and Cultural Background Survey designed to identify potential dialectical differences among the children.

Results from the Linguistic and Cultural Background Survey indicated that all participants used the dialect consistent with Central America, and six additionally used lexical features of dialects outside of Central America. Consequently, children were categorized into either a Central group or a Central Plus group. The Central group indicated the use of words specific to the Central American dialect of Spanish. The Central Plus group indicated use of Central American dialect specific words, as well as words specific to Standard and Caribbean dialects of Spanish. These two groups were compared on the assessments of phonological awareness and early literacy. The results indicated that there were no statistically significant differences on any of the assessments between the dialect groups. Although the comparisons on the measures of Letter Word Identification Subtest and Letter Name Letter Sound subtest demonstrated medium effect sizes in favor of the Central plus another dialect group, and Rapid Automatic Naming demonstrated a medium effect in favor of the Central only group. Further investigation is needed to demonstrate these medium effects to a greater extent.
Chapter 1

Literature Review

Growing Populations of Hispanic Culture

According to the United States Census Bureau, in July of 2016 almost 18% of the United States’ population is of Hispanic or Latino descent. Furthermore, from 2012-2016, 21.1% of people over the age of five spoke a language other than English at home. The numbers are even higher for the state of Florida; 25% of the state’s population is Hispanic or Latino and 28.3% over the age of five speak a language other than English at home (“Tampa Population and Demographics”, n.d.). In 2008 the U.S. Census Bureau projected that by the year 2020 the number of Spanish-speakers in the U.S. will have increased by over 6.2 million citizens over a ten-year period (Ortman & Shin, 2011). These statistics unarguably support the trend that the Spanish-speaking population continues to grow within the United States and will only continue to do so. With these shifting populations comes the responsibility of adjusting the education system. These adjustments include shifts in cultural identity, accessibility to overcome language barriers, and the certain aspects of literacy education of Hispanic/Latino populations (Ortman & Shin, 2011). Of utmost importance is ensuring that young Latinos achieve fundamental communication, language, and literacy skills.

Phonological Awareness and Emergent Literacy Skills

Phonological awareness is defined as a child’s ability to identify “the phonological segments in spoken word,” and the child’s ability to accomplish this greatly “facilitat[es its] effect on early reading and spelling acquisition” (Blachman, Tangel, Ball, Black & Mcgraw,
Numerous studies have investigated the association between phonological awareness and emergent literacy (Bradley & Bryant, 1983, Kozminsky & Kozminsky, 1995, Vandervelden & Siegel 1997). In addition to studies demonstrating an association between these skills, others have shown the positive effects of phonological awareness instruction in kindergarten on reading outcomes in first and second grade (Blachman, Tangel, Ball, Black & Mcgraw, 1999). Specifically, this phonological awareness instruction program emphasized building phonological awareness and explicitly teaching the alphabetic code (a principle closely related to phonological awareness). The children who participated in this phonological awareness program showed a remarkable advantage in reading, relative to those who did not participate in the program by the end of grades 1 and 2 (Blachman, Tangel, Ball, Black & Mcgraw, 1999). This study shows the obvious academic advantages for children who are given explicit instruction of phonological awareness principles. An early emphasis on phonological awareness skills in English speaking children show positive effects with their overall emergent literacy abilities.

Phonological awareness is similarly important for reading success in all alphabetic languages, including the Spanish language. The direct relationship demonstrated that the emergent literacy skills of Spanish-speaking preschool children is strongly tied to phonological processing abilities (Anthony, Williams, McDonald, Corbitt-Shindler, Carlson, & Francis, 2006).

**Dialectical Variations and Emergent Literacy**

Another factor that impacts early literacy development for children, no matter the language spoken, are dialectal variations. A dialect is a regional variety of language distinguished by features of vocabulary, grammar, and pronunciation from other regional varieties ("Dialect", n.d.). Early literacy skills are often impacted by the language varieties to
which young children are exposed. For example, in young children exposed to African American Vernacular English (AAVE), early literacy skills can be positively impacted by the use of AAVE. Some AAVE speakers demonstrate “bidialectism,” a process in which these children can switch from use of AAVE and Standard American English (SAE), dependent upon on the situation (Neuman & Dickinson, 2011). This skill is similar to that of code switching between languages and has been shown to positively impact early literacy skills due to the cognitive-linguistic flexibility that it demonstrates.

There are a number of varied dialectal variations of the Spanish language dependent upon cultural and regional backgrounds. For this study, data collection was completed in Tampa, Florida. According to the U.S. Census Bureau in 2000, in the Tampa, Florida region, the Hispanic population makes up approximately 20% of the entire city’s population. From there, the Hispanic population in Tampa can be further categorized: approximately 2% Mexican, 7% Puerto Rican, 5% Cuban, and almost 7% from other unspecified Hispanic backgrounds. It is for these reasons related to demographic breakdowns that this study will primarily focus its analysis of three main Spanish dialects specific to the Tampa area: Caribbean, Central American, and Standard Spanish.

The dialectical differences that exist between these three main categories may have important implications for the assessment and instruction of emergent literacy skills in emerging bilingual children. These dialectal variations manifest themselves in terms of varied lexical diversity, as well as morphological and syntactical components (Mackenzie, 1999). By better understanding these linguistic differences of dialect one can better understand the influence they will have on a bilingual child’s language development.
In an effort to control the overwhelming amount of dissimilarities between multiple Spanish dialects, one institution, called the Real Academia Española, created a linguistic movement in 1713 called Standard Spanish (Norvet, 2016). This artificially constructed dialect of Spanish was made as an attempt at universalizing the Spanish language for mass understanding, regardless of linguistic and cultural influence. It aims to remove regional idioms and idiosyncratic properties so that anyone with a basic understanding of the Spanish language can understand the message. This dialect has undergone much scrutiny from those who feel that it strips the Spanish language of important cultural identifiers. For example, Naidoo and Lopez-Robertson (2007) have criticisms in terms of children’s literature. They feel that utilizing Standard Spanish in the creation of bilingual Spanish-English children’s books is a disservice to those who identify with a certain Hispanic cultural identity. While some feel that the universality of Standard Spanish is important for accessibility reasons, others feel that by maintaining the original use of regional dialects maintains a level of cultural authenticity (Naidoo & Lopez-Robertson, 2007).

Standard Spanish dialect, often the dialect taught in schools or used for mass media, emphasizes the elimination of regionalisms specific to other dialects. Overall the Spanish language utilizes five vowels: [i], [e], [a], [o] and [u]. The consonantal phonemes are similar to that of the English language, with the addition of a trill (where the tongue tip vibrates against roof of mouth in a current of air, similar to that of the /r/ sound in the Spanish word ‘perro’). In addition, there is a velar fricative (/x/ as in the initial sound in the word ‘Xalapa’), as well as the palatal nasal sound (/ɲ/ as in medial sound in the word ‘niño’). The phonemic inventory of a Standard Spanish dialect can be seen in further detail in Table 1. The main differentiating feature of Standard Spanish is the absence of regionally specific idioms (Mackenzie, 1999).
Table 1

Phonemic inventory of Standard Spanish Dialect

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Labiodental</th>
<th>Dental</th>
<th>Alveolar</th>
<th>Postalveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plosive</strong></td>
<td>p</td>
<td>b</td>
<td>t</td>
<td>d</td>
<td>k</td>
<td>g</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nasal</strong></td>
<td>m</td>
<td></td>
<td>n</td>
<td></td>
<td>j</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Trill</strong></td>
<td></td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tap or Flap</strong></td>
<td></td>
<td></td>
<td>f</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fricative</strong></td>
<td></td>
<td></td>
<td>s</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Affricate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>tʃ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Glides</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>w</td>
<td>j</td>
<td></td>
</tr>
<tr>
<td><strong>Liquid</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>l</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Approximation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Geographically, the areas considered to utilize the Caribbean dialect of Spanish are the Dominican Republic, Cuba, Puerto Rico, northern Colombia, eastern Panama, and some areas of Venezuela. (Mackenzie, 1999). From the beginning of the 18th century through the 1960s, Canary Islanders participated in mass immigration to the Caribbean. Due to this immigration, the Caribbean dialect of Spanish has irrefutable similarities to that of Canary Island Spanish (Pérez, 1955). When comparing Standard Spanish dialect to that of the Caribbean dialect many divergent characteristics are evident. Phonologically, these characteristics can be seen in terms of
consonantal weakening, elision or distortion of liquids in the final position, and nasalization during speech. Further differences in lexical usage are also apparent; *chiva*, meaning small bus in Caribbean dialect, would be unrecognizable to someone using another Spanish language dialect (Mackenzie, 1999).

The Central American dialect of Spanish is spoken in the regions of Costa Rica, Nicaragua, Honduras, El Salvador and Guatemala, and southern regions of Mexico. In this dialect it is phonologically common to see [s] to [h] substitutions. Take, for example, the Spanish word *entonces*. In standard dialect, this word is pronounced [entonθes], but in Central American dialect it is commonly pronounced [ãtõhe] ((Mackenzie, 1999, Morrás, 2004). Lexically, this dialect is the most abundant in linguistic idioms specific to regional areas. Idiomatic Central American vocabulary often borrows linguistic characteristics of indigenous languages like Nahuatl (the indigenous language of the Aztec people). The linguistic history of Nahuatl is regionally specific to the Central American region. There are numerous lexical differences that exist when comparing that of Standard Spanish vocabulary with that of Central American Spanish vocabulary. This often can create a disconnect in semantic meaning, depending on the regional use of the specific vocabulary terms. Some lexical choices are strictly dependent on region, while others may have invented words entirely dependent on cultural meaning. One example is the word *fresa*; literally translated the meaning is ‘strawberry’. However, specific to Mexican dialect, it is an adjective that can be used to describe someone from a higher educational or socioeconomic background (Gómez, 2014).

**Current Methods of Evaluation for Phonological Awareness**

There are many assessments of phonological awareness available in English that have been tested and standardized. The assessments focus on tasks that require phonological
awareness to successfully complete, like deletion, elision, segmenting of multisyllabic words, and others. One assessment, The Comprehensive Tests of Phonological Awareness, Second Edition (CTOPP-2; Wagner et al., 1999) contains a subtest focusing on sound matching for words in the initial and final positions. This assessment also includes tests of elision. For example, the administrator of the elision subtest would say ‘repeat the word ‘lamp’ without the \(/l/\) sound. Subtests such as these from the CTOPP-2 (Wagner et al., 1999) show the child’s ability to manipulate words at a word, syllable, and phoneme-level, thus demonstrating his/her overall phonological awareness abilities.

Another assessment of phonological awareness in English is the Phonological Awareness Test-2 (PAT 2; Robertson & Salter, 2007). For this assessment, the rhyming task asks children to recognize rhyming pairs using pointing and then subsequently provide another word that rhymes with the pair. This assessment also focuses on blending subtests that measure a child’s ability to create a new word based on two given speech sounds (i.e. what word do the sounds /k/ and /æt/ make? The child should respond ‘cat’; Robertson & Salter, 2007). Segmenting tasks are similar to the blending subtests; they ask children to instead segment the words into their respective phonemes. The final subtest of note from the PAT-2 is the subtest that requires children to substitute phonemes to form new words (Robertson & Salter, 2007).

Unfortunately, the same options for assessment of phonological awareness in the English language simply do not exist to the same extent in Spanish. A previous study aimed to resolve the scarcity of available assessments. Its goal was to further investigate the validity of a new assessment of phonological awareness in Spanish. The Dynamic Assessment of Phonological Awareness in Spanish (DAPA-S; Loreti, 2015) was created to measure phonological awareness abilities in Spanish-speaking children. The results of this study showed a strong, significant
correlation between phonological awareness as measured by the DAPA-S, and phonological awareness as measured by previously standardized means. Concurrent validity is parameter that represents the extent to which an assessment corresponds to an established measure of the same construct. Convergent validity is the parameter that represents the degree to which two measures that should be measuring the same construct are related. This indicated supportive evidence for concurrent validity between the DAPA-S and Spanish measures of elision, rapid automatic naming (RAN), and letter-sound knowledge, and strong convergent validity between the DAPA-S and measures of emergent reading (Loreti, 2015). This study used a shortened version of the DAPA-S, the DAPA-S short-form.

**Statement of Purpose**

The purpose of this study was to determine if a relationship exists between dialectal differences of the Spanish language and phonological awareness abilities in children via the Dynamic Assessment of Phonological Awareness in Spanish–Short-Form (DAPA-S short-form), based on the previously established full assessment of the DAPA-S (Loreti, 2015). A parental survey given at the beginning of the study asked questions about the linguistic/cultural backgrounds of the study participants. Consequently, this study seeks to answer the following question: Are differences in children’s Spanish linguistic and familial backgrounds associated their emergent literacy skills, as indicated by measures of phonological awareness and other measures of early literacy?
Chapter 2

Methods

Participants

In this study, there were twelve Spanish-speaking participants total (8 males and 4 females), with Latin American familial origins. All participants were recruited from a not-for-profit organization that offers educational services to families in the East Hillsborough County area of Florida. Participants’ ages ranged from 3.17 years to 7.5 years. The participants of this investigation were simultaneous learners of both English and Spanish, meaning both languages are being learned from birth. Detailed information about the participants’ demographic background can be found in Table 2; this information was collected via the first portion of the Linguistic and Cultural Background Survey.

Per the linguistic and cultural background surveys distributed (presented in full in the appendix), 11 out of 12 participants were born within the United States; one participant was noted as being born outside of the United States (in Central Mexico). All participants lived at home with various family members, and most participants indicated that Spanish was the primary language spoken at home (two families indicated that both Spanish and English were spoken as equal primary languages). Participants’ daily exposure to and use of the Spanish language was an average of 40-60%. Similarly, the participants’ daily exposure to and use of the English language was an average of 30-50%.
<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Response Language</td>
<td>English</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish &amp; English</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
</tr>
<tr>
<td>2. Born in: West/ Central Florida</td>
<td>West Florida</td>
<td>Central Mexico</td>
<td>West/ Central Florida</td>
<td>West Florida</td>
<td>West/ Central Florida</td>
<td>West Florida</td>
<td>West Florida</td>
<td>West Florida</td>
<td>Florida</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Parents born in: West Florida</td>
<td>Mexico</td>
<td>Central Mexico</td>
<td>Northern Mexico</td>
<td>Central Mexico</td>
<td>Central Mexico/ Western Mexico</td>
<td>Southern Mexico</td>
<td>Southern Mexico</td>
<td>Central Mexico/ Southern Mexico</td>
<td>Central Mexico</td>
<td>Central Mexico/ Western Mexico</td>
<td>Monterrey Mexico; Luispotosi Mexico</td>
<td></td>
</tr>
<tr>
<td>4. Time living in the U.S. Since 4 years old</td>
<td>Since 4 years old</td>
<td>Since 3 years old</td>
<td>Since birth</td>
<td>No answer</td>
<td>Since birth</td>
<td>Since birth</td>
<td>Since birth</td>
<td>Since 5 years old</td>
<td>No Answer</td>
<td>Since birth</td>
<td>4 yrs 11 months</td>
<td></td>
</tr>
<tr>
<td>5. Who lives at home: Husband/ Daughters</td>
<td>Wife/ Wife’s sister</td>
<td>Wife/ Cousins</td>
<td>Dad/ Mom/ Sons</td>
<td>Mom/ Dad</td>
<td>Mom/ Dad/ Siblings</td>
<td>Dad/ Siblings</td>
<td>Mom/ Dad/ Siblings</td>
<td>Mom/ Dad</td>
<td>Mom/ Dad/ Siblings</td>
<td>Dad and brother</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Languages at home: English/ Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish</td>
<td>Spanish/ English</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
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<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>7. % of day speak/hear Spanish:</td>
<td>40-60%</td>
<td>60-80%</td>
<td>40-60%</td>
<td>More than 80%</td>
<td>20-40%</td>
<td>60-80%</td>
<td>60-80%</td>
<td>20-40%</td>
<td>40-60%</td>
<td>20-40%</td>
<td>60-80%</td>
<td>60-80%</td>
</tr>
<tr>
<td>8. Who uses Spanish with child?</td>
<td>Mom/Dad</td>
<td>With everyone in the house</td>
<td>Mom</td>
<td>Entire family</td>
<td>Mom/Dad</td>
<td>Everyone</td>
<td>Parents/brother</td>
<td>Siblings</td>
<td>Entire family</td>
<td>Mom/Dad</td>
<td>Mom/Dad</td>
<td>Mom/Dad/Brother</td>
</tr>
<tr>
<td>9. % of day speak/hear English:</td>
<td>More than 80%</td>
<td>20-40%</td>
<td>40-60%</td>
<td>0-20%</td>
<td>More than 80%</td>
<td>40-60%</td>
<td>0-20%</td>
<td>Not answered</td>
<td>40-60%</td>
<td>More than 80%</td>
<td>60-80%</td>
<td>60-80%</td>
</tr>
<tr>
<td>10. Who uses English with the child?</td>
<td>Mom/Dad/Sisters</td>
<td>Teacher(s) at school</td>
<td>Dad</td>
<td>Teachers at school</td>
<td>Mom</td>
<td>Brothers</td>
<td>Teachers at school</td>
<td>Teachers at school/Sister</td>
<td>Mom</td>
<td>Teachers at school/Brothers</td>
<td>With his brother and friends</td>
<td></td>
</tr>
<tr>
<td>11. Age when family started using Spanish:</td>
<td>3 years old</td>
<td>Always</td>
<td>3 years old</td>
<td>Since birth</td>
<td>Since birth</td>
<td>Since birth</td>
<td>Since birth</td>
<td>Since birth</td>
<td>Since birth</td>
<td>Since birth</td>
<td>Since birth</td>
<td>1 year old</td>
</tr>
</tbody>
</table>

Note. Numbers across the top are Participant ID numbers.
Procedures

This research was approved by the institutional review board at the University of South Florida. All informed consent was provided by participants’ parents or legal guardians via a written form prior to participation in the investigation. Participants received stickers and a bilingual children’s book in both English and Spanish for their participation in the study.

Parents of the participants completed a linguistic and cultural background survey, in order to better assess the linguistic and cultural backgrounds of each participant. The survey evaluated the percentage to which a child is exposed to the Spanish/English languages on a daily basis, as well as dialectal and cultural variations that occur within the child’s Spanish language use. The survey is presented in its entirety within the appendix.

Three separate bilingual female researchers administered all assessments in a space with minimal to no distractions at the child’s school. Administration of assessments took approximately 45 minutes, and data collection of this study was done over the course of 5 days. All testing administration, instructions for testing, and transportation between the testing room and child’s location was conducted in Spanish. Participant responses in Spanish were openly accepted by the researchers; if a participant responded in English they were immediately prompted to respond in Spanish. Participants received feedback via verbal praise from the researchers, or visual feedback via the computer-based assessment (i.e. smiley faces on computer tablet). Tangible reinforcements were provided prior to conclusion of participant study (i.e. stickers and a bilingual Spanish/English children’s book).

Dynamic Assessment of Phonological Awareness in Spanish – Short Form (DAPA-S Short Form)

The DAPA-S short form is a shortened version of the original DAPA-S described in Loreti (2015). As such, it is identical to the original except that it requires fewer trials. The DAPA-S short form has limited verbal instructions, requires nonspeech responses, and has a dynamic component that allows participants to learn from taking the test. The assessment is also computer based,
making it less likely to have administration errors, as well as quicker administration times. This test was created with the intention to address the scarcity in Spanish assessments of phonological awareness.

The DAPA-S short form was administered via the Paradigm Experiments (*Perception Research Systems*, 2007) application on an 11” Dell tablet computer. Printed nonwords were displayed in lowercase, black 72-point Bold Arial font on a white background. All auditory stimuli were digital recordings by an adult, female Spanish-dominant bilingual speaker who spoke a standard dialect of Spanish with a neutral accent. As administered, it had two subtests that measured awareness of first syllables and last syllables. Nonword pairs were used in order to eliminate a bias of correct answers based on familiarity. For each subtest there were four phases of testing: a pre-instruction phase, a testing phase, and, if necessary, a teaching phase and one more testing phase. The teaching phase was offered to those who failed the initial testing phase, but passed the pre-instruction. Examples of the different trial types that defined the phases are presented in Figure 1. In the pre-instruction phase, each nonword pair was presented up to two times to make sure the child could match the printed stimuli used in the assessment. Once the child passed pre-instruction, the assessment presented 12 trials and, on each, evaluated whether the child could match the audio recording presented with the printed word. If they got 10 or more correct, then they were awarded a score of 3 and the subtest concluded. If not, then they received 12 teach trials where the assessment attempted to teach the task by including the printed target in the middle of the screen along with the audio stimulus. If the child got 10 or more correct in the teaching trials, then they were tested again to see if they learned the skill. An example of this is shown in Figure 2.
Figure 1

. Tablet screen display of pre-instruction, test, and teach blocks. Example uses nonword pair from the first syllable subtest (Loreti, 2015).

Table 3

Nonword pairs for DAPA-S Subtests

<table>
<thead>
<tr>
<th>First Syllable</th>
<th>Final Syllable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lima/Kuma</td>
<td>Tika/Tilo</td>
</tr>
<tr>
<td>Lito/Kuto</td>
<td>Kusa/Kupo</td>
</tr>
<tr>
<td>Lisa/Kusa</td>
<td>Kufa/Kumo</td>
</tr>
<tr>
<td>Lipo/Kupo</td>
<td>Tiga/Tibo</td>
</tr>
<tr>
<td>Lifo/Kufo</td>
<td>Kuna/Kufo</td>
</tr>
<tr>
<td>Lina/Kuna</td>
<td>Tila/Tiko</td>
</tr>
</tbody>
</table>

The six nonword CVCV (consonant, vowel, consonant, vowel) minimal pairs shown in Table 3 were used. The CVCV form was chosen for its similarity in syllabic form to the Spanish language (Ignacio Hualde, Olarrea, & O’Rourke, 2013). As shown in Figure 2, each set of pairs were presented two times to counterbalance the positions of the words on the screen. If the correct answer was selected a form of both visual and auditory feedback was presented to the participant (i.e. a smiley face with an accompanying verbal feedback stating ¡Muy Bien! (Very good!)). If the
incorrect answer was selected, then a sad face appeared with accompanying auditory feedback (i.e. a voice saying Oh-Oh (Uh-Oh)).

**Figure 2.** Depiction of DAPA-S Screener blocks and point system. Flowchart uses example nonword pairs from the first syllable subtest.

**Preschool Language Scales Screening Test**

Children were given the Preschool Language Scales Spanish Screener, 5th edition (PLS-5) as a means of inclusionary measures to determine typical language development skills in Spanish prior
to testing. The PLS-5 was also used as a means of validating the DAPA-S short-form, as it is a previously established language screener that has supported validity/reliability.

**Subtests of the TOPSS**

The Test of Phonological Sensitivity in Spanish (TOPSS; Brea et al., 2003) was administered as a means of phonemic/phonological assessment, in addition to the DAPA-S short form. Three subtests from the TOPSS were utilized: the elision, letter-name and letter-sound, and rapid automatic naming (RAN) subtests. The elision subtest is one in which the participant is expected to isolate certain phonemes, demonstrating his/her ability to manipulate sounds to give new meaning. For example, the administrator of the subtest would say in Spanish “Repite la palabra noche. Ahora, sin decir la che” (Repeat the word noche. Now, without saying the che). The letter-name/letter-sound subtest aims to test the child’s knowledge of the alphabet via letter names and sounds. For example, the participant is given the written stimuli for the letter ‘p’; the child is then asked in Spanish “what letter is this?” and “what sound does it make?”. The RAN subtest asks the child to verbally express both animal name and color of a given set of pictorial stimuli.

**Woodcock-Muñoz Reading Subtest**

The Woodcock-Muñoz Language Survey-Revised (WMLS-R; Woodcock et al., 2005) was used as a means of measuring emergent literacy abilities. The letter-word identification subtest in Spanish was used with participants. This subtest aims to test children's abilities to identify letters/words in familiar and unfamiliar stimuli. The items increase in difficulty, beginning with simple letter identification and eventually developing to written words that the child is expected to verbally read aloud.

**Linguistic and Cultural Background Survey**

The development of the linguistic/cultural background survey was intended as a means for gathering information on the language backgrounds of the participants. Given the ample amount of varied dialects of Spanish, mentioned earlier in the literature review section, it was necessary to further analyze these cultural/linguistic nuances between participants. This survey was developed
using characteristics documented in previous research of the three dialects mentioned earlier in the literature review portion (Zentella, 1990, “Real Academia Española”, n.d., Ramírez, 1992, Mackenzie, 1999). It could be beneficial for data analysis purposes to take a holistic approach to understanding cultural/linguistic variances of each participant, and analyzing the potential comparison to that participants’ early literacy abilities.

The parental questionnaire contained items to gather information about both the participants’ cultural background and which Spanish dialect they are exposed to. All questions were written in both English and Spanish to best accommodate the language needs of all parents of the participants. The beginning portion of the questionnaire included direct questions such as “where was your child born?” “where were you and your spouse born?” and “with whom does your child speak Spanish?”. The answers to these demographic based questions are located in Table 2.

Based on the geographical area where the study was conducted, and to narrow the scope of the survey items, it was predicted that the participants would fall into one of three dialectal categories: Central, Caribbean, or Standard. For that reason, a list of words with various dialect categories was given in the parental questionnaire. Each word presented had a semantic counterpart that was equal in meaning, but varied depending on dialect use. For example, the word ‘straw’ in English can be said in Spanish in two different ways. In Spanish, you can translate the word either by saying ‘popote’ or ‘pajita’. It is more common in Central American dialect to use the former, while the latter is more closely related to Standard Spanish. It should be noted that although there are more than two ways of translating the word ‘straw’ into Spanish, these two were chosen for their specificity to both Central and Standard dialects of Spanish. Parents of the participants were given the list of words and then asked to mark any words that were a part of their daily use. This list of words was chosen based on research that demonstrated dialect variability (Zentella, 1990, “Real Academia Española”, n.d., Ramírez, 1992, Mackenzie, 1999).

Three pictures were presented at the end of the parental questionnaire. The directions were “please write a word to describe what you see in the picture.” In the case that there was possibly an
exception from the three established categories of dialect, the parental questionnaire gave the three pictures at the end so that the parents were free to respond with their own dialect. The three pictures were of a boy, a monkey, and a bus (Romey, 2017, “Real Academia Española”, n.d., Mackenzie, 1999, Zentella, 1990). These three pictures were chosen for their predicted variability in dialectal use. They were also given to help address any potential bias introduced by providing a closed list of words as described in the previous section of the survey. Many options exist for these three pictures given, and they were expected to give insight into the participant’s Spanish dialect. The Linguistic and Cultural Background Survey is presented in full in Appendix A.
Chapter 3

Results

The results of the dialect-focused questions from the Linguistic and Cultural Background Survey are presented in Table 4. The responses have been transcribed exactly as the parents wrote them. While half of the parents of the participants responded completely in Spanish, two responded only in English, and three responded in a mix of English and Spanish, and two wrote English names with Spanish spellings. Parents gave a wide variety of responses when asked to label the images in the survey (see appendix A).

As shown in Table 4, there were a wide variety of answers given by the parents for the image labelling section of the survey and many were unexpected. This is likely due to the open-ended nature of this section of the survey. To a large degree, the responses given made it very difficult to use this part of the survey for its intended purpose of classifying the regional dialect of participants. Specifically, the English only responses (Participants 1 and 9), the mixture of Spanish and English responses (Participants 4, 6, and 11), and the English words with Spanish spellings were impossible to classify. Furthermore, some other responses were simply the wrong label, making them impossible to classify (e.g., Participant 4 labelled the first image “Feliz” and the parent for participants 5 and 10 labelled both the first and second image “Ki”).
Table 4

Participant Dialect Information

<table>
<thead>
<tr>
<th>ID</th>
<th>Words identified as being used daily</th>
<th>First Image</th>
<th>Second Image</th>
<th>Third Image</th>
<th>Dialect classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Popote, pajita, sábana</td>
<td>Boy</td>
<td>Monkey</td>
<td>Bus</td>
<td>Central plus</td>
</tr>
<tr>
<td>2</td>
<td>Popote, lentes, celular, computadora</td>
<td>Niño</td>
<td>Mono</td>
<td>Autobus</td>
<td>Central</td>
</tr>
<tr>
<td>3</td>
<td>Sábana, celular, computadora</td>
<td>Niño</td>
<td>Mono</td>
<td>Camion</td>
<td>Central</td>
</tr>
<tr>
<td>4</td>
<td>Lentes, celular</td>
<td>Féliz</td>
<td>Mono</td>
<td>Bus</td>
<td>Central</td>
</tr>
<tr>
<td>5</td>
<td>Sábana, celular, zafacón</td>
<td>Ki</td>
<td>Ki</td>
<td>No Response</td>
<td>Central plus</td>
</tr>
<tr>
<td>6</td>
<td>Popote, sábana, lentes, celular,</td>
<td>Niño</td>
<td>Mono</td>
<td>Bus/autobus</td>
<td>Central</td>
</tr>
<tr>
<td></td>
<td>computadora</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Celular</td>
<td>Niño</td>
<td>Mono</td>
<td>Bos</td>
<td>Central</td>
</tr>
<tr>
<td>8</td>
<td>Popote, gafas, celular, móvil</td>
<td>Niño</td>
<td>Monki</td>
<td>Bus</td>
<td>Central plus</td>
</tr>
<tr>
<td>9</td>
<td>Popote, sábana, lentes, gafas,</td>
<td>Kid</td>
<td>Monkey</td>
<td>Bus</td>
<td>Central plus</td>
</tr>
<tr>
<td></td>
<td>celular, móvil, computadora, zafacón</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Sábana, celular, zafacón</td>
<td>Ki</td>
<td>Ki</td>
<td>No Response</td>
<td>Central plus</td>
</tr>
<tr>
<td>11</td>
<td>Popote, manta, sábana, lentes,</td>
<td>Niño</td>
<td>Mono/change</td>
<td>Bus/autobus</td>
<td>Central plus</td>
</tr>
<tr>
<td></td>
<td>celular, computadora</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Popote, lentes, celular,</td>
<td>Niño</td>
<td>Chango</td>
<td>Autobus</td>
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</tr>
<tr>
<td></td>
<td>computadora</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Participant 5 and 10 were siblings and the same survey was used for both participants. Central Plus refers to participants whose parents selected a central dialectal word and at least one word from either the Caribbean or Standard dialect.

Because of the variability in responses for the picture labelling section, the word choice section of the Linguistic and Cultural Background Survey was used to classify participants’ dialects. As described previously, the words listed were specific to one of three dialects of Spanish: Central American, Caribbean, or Standard Spanish. Parents were instructed to select any/all of the words that they use daily. Responses are presented in Table 4. All parents selected at least one word that was common to the Central American dialect. This was unsurprising given that all but one of the parents indicated they were born in Mexico. In addition to selecting words from Central
American dialect, three participants selected words specific to Standard Spanish, two participants selected words specific Caribbean Spanish, and one participant selected words specific to both Standard and Caribbean Spanish.

Because of the small sample size and limited variability of dialects represented by the participants in this study, the primary research question was evaluated by classifying children into two dialect groups: central only and central plus another dialect. This resulted in six children in each group with approximately equal mean ages (see Table 5). Next, the means of the two groups were compared across the variables of interest in this study: DAPA-S first syllable, DAPA-S last syllable, PLS, LWID from the Woodcock-Muñoz, and LNLS, Elision and RAN from the TOPSS. The results of these comparisons are presented in Table 5. A series of independent samples t-tests were calculated to determine whether differences observed were statistically significant.

As indicated in Table 5, there were no significant differences between the means for any of the measures of phonological awareness or early literacy as a function of dialect group, $t = -1.14$ to $.43$, $p = .29$ to .84. In addition, Cohen’s d effect sizes for each comparison were calculated to determine the magnitude of the differences in addition to significance. Cohen stated that ds of .2, .5, and .8 corresponded to small, medium, and large effects, respectively (Cohen, 1988). As presented in Table 5, there were small differences between the groups for the DAPA-S first syllable, last syllable, and the PLS. The differences between the LWID, LNLS, and RAN, however, represented medium effects, in favor of the Central plus another dialect group.
Table 5

*Dialect Group Comparisons*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Central Only</th>
<th>Central Plus</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age</td>
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<td>n</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>5.0</td>
<td>4.7</td>
<td>0.43</td>
<td>.67</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.4</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DAPA-S First</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>0.80</td>
<td>1.17</td>
<td>–0.43</td>
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<tr>
<td></td>
<td>SD</td>
<td>1.30</td>
<td>1.47</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>DAPA-S Last</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>M</td>
<td>0.40</td>
<td>0.33</td>
<td>0.21</td>
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<td>SD</td>
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<td>0.52</td>
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<td></td>
<td>PLS</td>
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<tr>
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<td>n</td>
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<td>4</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>M</td>
<td>3.0</td>
<td>2.5</td>
<td>0.42</td>
<td>.68</td>
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<tr>
<td></td>
<td>SD</td>
<td>1.7</td>
<td>2.1</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>LWID</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>6</td>
<td>4</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>9.83</td>
<td>14.75</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LNLS</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>14.20</td>
<td>23.75</td>
<td>–0.74</td>
<td>.48</td>
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<tr>
<td></td>
<td>SD</td>
<td>14.53</td>
<td>24.08</td>
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<td></td>
<td>Elision</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>n</td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>0.00</td>
<td>2.75</td>
<td>–1.14</td>
<td>.29</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>0.00</td>
<td>5.50</td>
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<tr>
<td></td>
<td>RAN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>199.6</td>
<td>324.5</td>
<td>–0.68</td>
<td>.52</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>137.7</td>
<td>385.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. PLS = Preschool Language Scale; LWID = Letter Word Identification; LNLS = Letter Name Letter Sound; RAN = Rapid Autotomized Naming.
Chapter 4

Discussion

This study sought to evaluate whether children who were exposed to different dialects of Spanish also demonstrated differences in phonological awareness and early literacy in Spanish. There was minimal evidence of any differences between children who were exposed to only a Central American Spanish dialect and those who were exposed to Central American Spanish and Caribbean or standard Spanish Dialect. Specifically, there were no statistically significant differences on any of the assessments between the two groups, although the comparisons on the measures of LWID and LNLS demonstrated medium effect sizes in favor of the Central plus another dialect group and RAN demonstrated a medium effect in favor of the Central only group. Although the lack of statistical significance may be due to the small sample size in this study, these effect sizes should be interpreted with caution.

That said, the tentative finding that children in the Central plus dialect group performed somewhat better on LWID and LNLS is in line with the “bidialecticism” advantage mentioned previously (Neuman & Dickinson, 2011). Given that the Central plus another dialect group was able to demonstrate this concept of bidialecticism with multiple dialects, they are given a potential advantage towards early literacy skills given the linguistic flexibility that is necessary for switching between multiple dialects.

Limitations and Future Directions

Several limitations may have affected the outcome of this study. The first limitation is the possible lack of external validity that this study contains. First, this study contained a small sample size and a larger sample, with increased power, may have resulted in statistical significance.

Second, an overall lack of variability in cultural/linguistic backgrounds may have contributed to the findings. Most participants were noted as utilizing the Central American dialect
of Spanish from areas of Mexico. Furthermore, all participants were recruited from the same local Central Florida preschool. Given certain familial circumstances of each child, consistent attendance for participation in the study was also compromised making the testing of each participant problematic. For these reasons, this may not be representative of a true bilingual English-Spanish speaking population.

Another unexpected influencing factor that may have impacted the outcome of this study was the age of the participants. Although the aim of this study was to compare phonological awareness skills in those with varied dialectal Spanish speaking backgrounds, it was difficult to determine to what extent age may have also influenced the outcomes on the measures of phonological awareness. In particular, some of the participants were quite young (i.e., less than 4) and would not necessarily be expected to demonstrate early literacy knowledge. No measurement of prior schooling, previous to testing, was given. Future research should be careful to recruit older children that would be more likely to demonstrate measurable early literacy skills.

Another limitation to this study was the lack of pre-existing, established measures of phonological awareness for Spanish speakers. For this study, the TOPSS (Brea et al., 2003) and the DAPA-S short form were used to evaluate differences among the dialect groups. Both assessments, however, are unpublished, and their psychometric properties have not yet been established. Future directions for this study would benefit from utilizing more established measures of phonological awareness for Spanish speakers.

Similarly, the Linguistic and Cultural Background Survey was an informal survey. The questions were created in an attempt to classify dialectal and cultural backgrounds. However, the open-ended nature of some the questions (i.e., the picture naming items) created unexpected answers from the participants’ parents that made classifying dialects difficult. In addition, the survey did not specifically ask participants to answer all questions in Spanish which contributed to some unexpected answers. For example, one participant answered with a Spanish spelling of an English word (i.e. ‘monki’). Furthermore, the fact that participants tended to respond in a way that
made it clear they were categorized into more than one dialect also made analysis challenging. Some of the shared similarities between dialects made for difficult clear categorization of the participant’s linguistic backgrounds. While most participants were expected to arrange dialects neatly into one of three categories, many overlapped into categories of two or more dialect use. Two words, different in vocabulary but the same in semantic use, were given as a means of establishing one dialect from another. As the responses indicate, some parents and children unexpectedly utilize aspects of more than one specific dialect, regardless of birthplace or cultural background. Future studies would benefit from utilizing possible focus groups or personalized interviewing as a means of collection dialect and cultural information on participants instead of the Linguistic and Cultural Background Survey. In addition, future studies might consider focusing on dialect use within one country (i.e. comparing dialects from different regions in Mexico with early literacy skills).

Conclusion

Phonological awareness is a skill that is closely tied with abilities in early literacy for children. When given children of various linguistic/cultural backgrounds there are certain considerations that should be in place during assessment of these skills. Emerging bilingual children of various Spanish dialects have varied lexical, morphological, and phonological abilities. These dialectal differences contribute even further to the modifications that should be accounted for when assessing early literacy skills. This study demonstrated that there may be an indication for increased phonological awareness skills given a child who is exposed to more than one type of dialect within the Spanish language. While further testing is needed to truly establish the presence of this relationship, the effects were indicative of a possible relationship. Although these results do not support the concept that varied Spanish dialects affect early literacy in emerging bilingual children, there is supporting evidence for further investigation to be justified. With considerable numbers of bilingual and Hispanic populations growing this research is significant for future investigation.
References


Appendix A: Linguistic and Cultural Background Survey

Parental Questionnaire/Encuesta Parental

** If you agree for your child to participate, then please fill out and return this questionnaire along with the consent form. Thank you.

**Si usted está de acuerdo que su hijo participe, por favor complete y devuelva este cuestionario junto con el formulario de consentimiento. Gracias.

1. Where was your child born? (city and country)
   ¿Dónde nació su hijo/a? (ciudad y país)

2. Where were you and your spouse born? (city and country)
   ¿Dónde nació usted y su esposo/a? (ciudad y país)

3. How long has your child been living in the United States?
   ¿Hace cuánto tiempo ha vivido su hijo/a en los Estados Unidos?

4. Who lives at home with you and your child?
   ¿Quién vive en casa con Usted y su hijo/a?

5. What languages do the family members at home speak to each other?
   ¿Cuáles idiomas habla la familia con cada uno en casa?

6. How much of your child’s day is spent speaking or hearing Spanish? (Pick one)
   ¿Qué cantidad del día su hijo/a se pasa hablando o escuchando español? (Elige uno)
   - 0-20%
   - 20-40%
   - 40-60%
   - 60-80%
   - More than 80%  
     - Más que 80%

7. With whom does your child speak Spanish?
   ¿Con quién habla español su hijo/a?
8. How much of your child’s day is spent speaking or hearing English? (Pick one)
¿Qué cantidad del día su hijo/a se pasa hablando o escuchando inglés? (Elige uno)

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>0-20%</td>
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<td>60-80%</td>
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<tr>
<td>More than 80%</td>
<td>Más que 80%</td>
</tr>
</tbody>
</table>

9. With whom does your child speak English?
¿Con quién habla inglés su hijo/a?

10. How old was your child when your family started speaking Spanish to him/her?
¿Cuántos años tenía su hijo/a cuando la familia empezó hablar español con él/ella?

Please mark any words that are a part of your daily use:
Por favor, marca cualesquiera palabras que son una parte de su uso diario:

- popote
- pajita
- manta
- sabana
- lentes
- gafas
- descarado

- túbano
- cigarro
- celular
- móvil
- computadora
- ordenador
- zafacón

Please write a word to describe what you see in the picture:
Por favor, escribe una palabra para describir lo que ves en la imagen:
Appendix B: IRB Approval

2/22/2018

Antonietta Mastrota,
Communication Sciences and Disorders
9481 highland oak dr apt 1209
Tampa , FL 33647

RE: Expedited Approval for Initial Review
IRB#: Pro00034081
Title: Validity of a Spanish, Non-speech Dynamic Assessment of Phonemic Awareness in Children from Spanish-speaking Backgrounds
Study Approval Period: 2/21/2018 to 2/21/2019

Dear Ms. Mastrota:

On 2/21/2018, the Institutional Review Board (IRB) reviewed and APPROVED the above application and all documents contained within, including those outlined below.

Approved Item(s):
Protocol Document(s):
Protocol - DAPA-S

Consent/Assent Document(s)*:
Parental Permission Form - English.pdf
Parental Permission Form - Spanish.pdf

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab. Please note, these consent/assent documents are valid until the consent document is amended and approved.

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review
category:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Research Involving Children as Participants: 45 CFR 46, Subpart D

This research involving children as participants continues to be approved under 45 CFR 46.404: Research not involving greater than minimal risk.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval via an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) calendar days.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

[Signature]

Kristen Salomon, Ph.D., Vice Chairperson
USF Institutional Review Board