Examining aspects of code-switching ability in children who speak African American English

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INTRODUCTION

• Nationally representative standardized assessments have shown a persistent achievement gap between African American and European American students (e.g., Lee et al., 2007; NCES 2009-455).

• Many African American students initially learn to speak African American English (AAE), a dialect of English that differs from the dialect of instruction, Standard American English (SAE).

• Both dialects of English are systematic and rule governed (e.g., Labov, 1966).

• There are morphosyntactic and phonological differences between AAE and SAE that may impact comprehension for young AAE-speaking children when they listen to SAE (e.g., Beyers & Kam, 2006, 2009; Johnson, 2005; de Villiers & Johnson, 2007).

• Children when they listen to SAE (e.g., Beyer & Kam, 2006, 2009; Beyer & Kam, 2009, 2010; de Villiers & Johnson, 2007).

• To examine relationships among performance on these two experimental tasks and other individual differences, such as age and vocabulary size.

• To examine morphosyntactic and phonological differences between AAE and SAE that may impact comprehension for young AAE-speaking children.

• To examine relationships among performance on these two experimental tasks and other individual differences, such as age and vocabulary size.

• The correlations between some of the language measures and some of the experimental tasks support the claim that better language learners were more likely to code-switch. However, dialect categorization was not correlated with any language measures, suggesting that some aspects of code-switching are not directly related to language, at least to the language skills that we measured.

• The fact that dialect categorization and SAE comprehension were correlated suggests that both tasks may be measuring abilities related to code-switching.

METHODS

Participating characteristics

<table>
<thead>
<tr>
<th>Participants</th>
<th>Means (SD in parentheses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of boys, girls</td>
<td>15, 18</td>
</tr>
<tr>
<td>Age (months)</td>
<td>72 (16); range: 48 – 102</td>
</tr>
<tr>
<td>Race</td>
<td>African American or bi-racial</td>
</tr>
<tr>
<td>SES</td>
<td>32 low, 1 mid (parent interview)</td>
</tr>
<tr>
<td>Hearing Screening</td>
<td>All passed</td>
</tr>
<tr>
<td>PPVT-4 standard score</td>
<td>92 (11)</td>
</tr>
<tr>
<td>EVT-2 standard score</td>
<td>92 (8)</td>
</tr>
<tr>
<td>TACL-3 standard score</td>
<td>92 (2)</td>
</tr>
</tbody>
</table>

Procedure:

1. Training Phase:
   - A red monster and a blue monster were presented on a touch screen: all red monsters spoke AAE and all blue monsters spoke SAE (or vice versa).
   - The monsters both repeated a story segment, one at a time.
   - Child’s task after each monster spoke: “Touch the monster that just talked.”

2. Practice Phase:
   - Same as training (red monster and blue monster presented on screen)
   - No animation.
   - Story segment presented in either SAE or AAE

3. Test Phase:
   - Child's task after hearing story segment: “Touch the monster that talked.”
   - Feedback: No feedback
   - Same story as training: New story
   - Same voice/monster dyads as training: New, unfamiliar voice/monster dyads introduced (50% of trials)

RESULTS

<table>
<thead>
<tr>
<th>Experiment</th>
<th>Dependent Variables</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Dialect categorization</td>
<td>% correct</td>
<td>66 (19)</td>
</tr>
<tr>
<td>2a: Word comprehension</td>
<td>% correct on singular/neutral</td>
<td>69 (24)</td>
</tr>
<tr>
<td>2b: Sentence comprehension</td>
<td>% correct on PP</td>
<td>77 (22)</td>
</tr>
<tr>
<td>3: Present progressive sentences</td>
<td>% correct on PP</td>
<td>52 (14)</td>
</tr>
</tbody>
</table>

Correlations with participant characteristics

| Language scores | | |
|-----------------|-----------------|
| After particaling out age, EVT-2 raw scores were still a significant predictor of word comprehension measures and of PP sentence comprehension. After particaling out age, TACL-3 sentence comprehension raw scores were still a significant predictor of PP sentence comprehension and word comprehension for the cluster/singleton contrast. |

SUMMARY AND DISCUSSION

• The language skills of the children in this study seemed to be representative of those of children from low-SES families more generally.

• For example, Washington & Craig (1999) reported a mean of 91 on the PPVT-III for a similar group of children.

• The correlations of most of the experimental tasks with age suggest that these are valid tasks for this group of children.

• The absence of a correlation with age for the PPVT task is consistent with Johnson (2005) and de Villiers & Johnson (2007).

• The correlations between some of the language measures and some of the experimental tasks support the claim that better language learners are more able to code-switch.

• However, dialect categorization was not correlated with any language measures, suggesting that some aspects of code-switching are not directly related to language, at least to the language skills that we measured.

• The fact that dialect categorization and SAE comprehension were correlated suggests that both tasks may be measuring abilities related to code-switching.

LIMITATIONS AND FUTURE DIRECTIONS

• Small number of 7- and 8-year-olds (data collection is in progress).

• Language samples to measure dialect density not yet analyzed.

• Small number of items on the sentence comprehension tasks.

• Code-switching in bilingual children has been shown to be related to executive functioning. We have not yet analyzed the relationship between children’s task-switching ability and our experimental measures.