Evaluating the influence of peers on the acquisition of mainstream forms by children who speak African American English

ViLA 2021 Poster Presentation
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Background

- Usage rate of different features associated with African American English (AAE) change throughout early school years (e.g., Terry et al., 2012; Terry & Connor, 2012; Van Hofwegen & Wolfram, 2017)
- Several studies have found peer effects on school-age children’s academic and language growth (Henry & Rickman, 2007; Hanushek et al., 2003; Justice, Petscher, Schatschneider & Mashurn, 2011)
- Peer influence in classrooms may also be observed in dialect usage and acquisition of mainstream forms
- There are complex relationships among dialect variation, early literacy, and various demographic factors in the U.S.

Research Question: Do classroom peers’ usage rates of nonmainstream dialect features influence individual feature rates over the course of a school year?
Methods

- **Participants:**
  - $n=401$
  - Ages 5-8
  - Kindergarten and first grade

- **Schools** serve predominantly African American students from low-SES families

- **Larger intervention study** of a dialect-shifting curriculum

- **Assessments in fall and spring of school year:**
  - Diagnostic Evaluation of Language Variation - Screening Test (DELV-ST)
  - Basic Reading Cluster from the Woodcock Johnson Achievement Test IV (WJIV)

- **Dependent variable:** “DVAR” on DELV: items using AAE / scorable items
Results

- Linear mixed-effects models, classroom-level random intercept
- Dependent variable: individual DVAR score in spring
- Significant effects of interest
  - Classroom mean DVAR at baseline ($p<0.01$)
  - Classroom mean x Grade interaction ($p=0.01$, stronger effect in first grade)
- Other significant effects:
  - Individual Baseline DVAR ($p<0.001$)
  - Individual Baseline WJIV ($p<0.001$)
  - Percentage of African American students at school ($p=0.02$)

Scatter plot for illustration purposes; other regressors included in model
Discussion

- Correlational link between classroom peers’ non-mainstream feature rate and individual children’s usage rate of non-mainstream forms
- Effect more pronounced in first grade
- Unclear whether particular variables are more susceptible to peer influence than others
- Unclear whether differences represent change in repertoire (e.g., addition of verbal -s) or change in usage rate of variables in repertoire.
Acknowledgements

- Funding sources: Institute of Education Sciences Grant R305A17013, awarded to Jan Edwards, National Science Foundation Grant 1449815, awarded to Colin Phillips
- Children and families
- Teachers and principals in the Baltimore City Public School System
- Ebony Terrell Shockley, Jeffrey Harring, Rebecca Silverman, Tatiana Thonesvanh, and other members of the Learning to Talk Lab at the University of Maryland
References


Supplemental Material
DELV-ST

- Norm-referenced screener designed to determine whether a child speaks a non-mainstream variety of North American English, such as AAE
- Uses common features (15 total items):
  - Phonological features: th, cluster reduction
  - Subject-verb agreement
    - Verbal -s
    - has/have
    - doesn’t/don’t
    - wasn’t/were
- Dialect Variation (DVAR) score: responses using non-mainstream feature / scorable items

“The horses eat hay, but the rabbit...”
## Participant Descriptive Statistics

<table>
<thead>
<tr>
<th>Measure</th>
<th>K-Fall</th>
<th>K-Spring</th>
<th>Gr. 1 - Fall</th>
<th>Gr. 1 - Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>5.7 (0.4)</td>
<td>6.2 (0.4)</td>
<td>6.7 (0.4)</td>
<td>7.2 (0.4)</td>
</tr>
<tr>
<td>DVAR</td>
<td>83.1 (19.3)</td>
<td>79.2 (21.6)</td>
<td>76.5 (23)</td>
<td>68.5 (25.5)</td>
</tr>
<tr>
<td>WJ Basic Reading: Standard Score</td>
<td>89.8 (14.3)</td>
<td>94 (14.7)</td>
<td>89 (14.9)</td>
<td>92.5 (16.4)</td>
</tr>
<tr>
<td>WJ Basic Reading: W (Rasch) Score</td>
<td>393.7 (25.6)</td>
<td>418.9 (25.2)</td>
<td>425.2 (26.7)</td>
<td>445.5 (27.6)</td>
</tr>
</tbody>
</table>

Notes: WJ Basic Reading Standard Score has a standardized mean of 100 and standard deviation of 15. W-Score of 500 represents normative mean for a 10-year-old; standard deviation is 15.
## Model Summary

<table>
<thead>
<tr>
<th>Effect</th>
<th>$\beta^*$</th>
<th>Std. Error</th>
<th>df</th>
<th>$t$ value</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>0.02</td>
<td>0.06</td>
<td>29.99</td>
<td>0.34</td>
<td>0.734</td>
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<tr>
<td>DVAR Individual Baseline</td>
<td>0.62</td>
<td>0.04</td>
<td>367.47</td>
<td>17.07</td>
<td>&lt;0.001</td>
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<tr>
<td>DVAR Class - Baseline</td>
<td>0.20</td>
<td>0.07</td>
<td>24.07</td>
<td>2.82</td>
<td>0.009</td>
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<tr>
<td>Grade - Kindergarten (reference = Gr 1)</td>
<td>0.02</td>
<td>0.09</td>
<td>33.37</td>
<td>0.29</td>
<td>0.776</td>
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<tr>
<td>Class DVAR:Grade(K)</td>
<td>-0.23</td>
<td>0.08</td>
<td>22.34</td>
<td>-2.75</td>
<td>0.011</td>
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<tr>
<td>% Black students (school)</td>
<td>0.10</td>
<td>0.04</td>
<td>22.85</td>
<td>2.51</td>
<td>0.020</td>
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<tr>
<td>% Eligible for free lunch (school)</td>
<td>0.04</td>
<td>0.04</td>
<td>24.86</td>
<td>0.90</td>
<td>0.377</td>
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<tr>
<td>WJ-IV Reading Baseline (Individual)</td>
<td>-0.15</td>
<td>0.04</td>
<td>392.33</td>
<td>-3.55</td>
<td>&lt;0.001</td>
</tr>
</tbody>
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