Dialect mismatch: Implications for academic achievement

Jan R. Edwards, Peggy Rosin, Megan Gross, Jianshen Chen, and Allison Holt

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Disclosure

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Organization of talk

• **Study 1**
  – Does speaking a non-mainstream dialect make it more difficult to understand MAE?

• **Study 2**
  – Can we teach pre-kindergarten children about MAE in a short-term program?
The biggest problem in education in the U.S.

The achievement gap
Poverty results in many stressors on children

**Stressors:** Poor nutrition, poor medical care, higher levels of family stress, etc.
Poverty also results in poorer access to resources

_Resources:_ School funding, quality of teachers, quality of medical care, etc.
Linguistic consequence of poverty

- Non-mainstream dialect
  - Not a result of poor education, poor language skills, etc.
Dialect mismatch

Dialect of instruction ≠ Home dialect
Mainstream American Non-mainstream
English (MAE) dialect of English

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African American English

• Phonological differences
• Morphosyntactic differences
• Pragmatic differences

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How dialect mismatch may contribute to the achievement gap

1. Teacher expectations
2. Cognitive effort
3. Direct impact on decoding, etc.

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Previous research

• Children with higher dialect density (kindergarten to second grade) have poorer language and literacy skills (Patton Terry & Connor, 2012; Patton Terry et al., 2012).

• Children who are less able to dialect-shift from AAE to MAE have poorer language and literacy skills (Craig et al., 2013).

• All of this work correlates measures of dialect density (or dialect shifting) with standardized measures of language and literacy.
Study 1

- Study 1: Comprehension of MAE
  - How well do AAE-speaking children comprehend words that have endings that are contrastive in MAE but not in AAE?
  - What predicts children’s performance on this task?
Study 1: Participants and general procedure

• Participants
  – 105 African American children
  – 4- to 8-year-olds
  – Most spoke AAE.
  – Mostly from low-SES families

• General Procedure
  – 1 to 3 sessions
  – All children received a hearing screening, language sample, and standardized tests of receptive and expressive vocabulary.
  – Parents filled out demographic questionnaire.
Study 1: Participants and general procedure

• Dialect density
  – Measured from 50-utterance recorded language sample.
  – Sample elicited in conversation with a native AAE speaker.
  – Both morphosyntactic and phonological dialect features coded by a native AAE speaker.
  – Dialect density = number of dialect features/total number of words.
  – Dialect density ranged from 0 (3 children) to .28, mean = .06.
  – Only 85 children (out of 105) produced useable language samples.
Study 1. MAE comprehension: Stimuli

• Phonological contrast:
  – Final consonant cluster deletion
  – *coal* vs. *cold*
  – *coal* is ambiguous in AAE, but not in MAE

• Morphosyntactic contrast:
  – Plural marking
  – *cat* vs. *cats*
  – Plural is optional in AAE

• Stimuli recorded in AAE and MAE
Experiment 1. MAE comprehension: Procedure

• Training phase:
  – Each target picture named in AAE.
  – Child asked to name each target picture (*say _____ please*).

• Testing phase:
  – Point to ________ (in MAE).

“Point to goal”

Distracter  Filler  Target
Experiment 1. MAE comprehension: Results

<table>
<thead>
<tr>
<th></th>
<th>Singleton Consonant (Ambiguous Condition)</th>
<th>Consonant Cluster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonological</td>
<td>61 (31)</td>
<td>81 (19)</td>
</tr>
<tr>
<td>Morphosyntactic</td>
<td>65 (15)</td>
<td>74 (16)</td>
</tr>
</tbody>
</table>

- Ambiguous (in AAE) conditions were the most difficult.
- Accuracy was predicted by:
  - Expressive vocabulary size
  - Dialect density
Experiment 1. MAE comprehension: Results

**Left Panel:**
- Accuracy on MAE word comprehension task vs. Expressive vocabulary size
- \( R^2 = .27 \)

**Right Panel:**
- Accuracy on MAE word comprehension task vs. Dialect density
- \( R^2 = .28 \)
Experiment 1. Structural equation model

• What are the relationships among the measures that predict comprehension of MAE?

• Divided variables into:
  – Input variables
  – Mediating variables
Experiment 1. MAE comprehension: Discussion

• Non-mainstream dialect speakers do have difficulty understanding MAE.
• This was particularly true for words that are ambiguous in AAE, even though they are unambiguous in MAE.
• Both expressive vocabulary and dialect density independently predicted comprehension of MAE.
Study 2: A pre-kindergarten readiness program for non-mainstream English speakers

Talking & Learning for Kindergarten: TALK

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TALK: Purpose

Develop an effective curricular supplement to teach pre-kindergarten children about the differences between MAE and non-mainstream dialects in the context of an emergent literacy curriculum.

See www.learningtotalk.org/publications/presentations to download TALK manual.
TALK: Principles

• Use evidence-based practice language & literacy instruction

• Build metalinguistic skills

• Combine embedded and direct instruction

• Preselect NMAE-MAE contrasts and targets

• Encourage dialect shifting
TALK: Structure

- Head Start kindergarten readiness program
- Led by graduate students in speech-language pathology
- 7 weeks, 4 days per week (1 hour per day)
  - Opening circle
  - Rhyme time
  - Talk time
  - Closing circle
- Additional 1 hour per day classroom facilitation
# TALK: Targeted areas

<table>
<thead>
<tr>
<th>Area</th>
<th>TALK target example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonology</td>
<td>Word-final cluster deletion</td>
</tr>
<tr>
<td>Morphosyntax</td>
<td>Obligatory plural</td>
</tr>
<tr>
<td>Pragmatic</td>
<td>Indirect requests</td>
</tr>
<tr>
<td>Metalinguistic</td>
<td>Dialect shifting</td>
</tr>
<tr>
<td>Phonological awareness</td>
<td>Rhyming</td>
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<tr>
<td>Early literacy</td>
<td>Story telling</td>
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</tbody>
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TALK: Activities

- **Weekly Themes**
  - Vocabulary

- **Talk Time**
  - Shared book reading
  - Dramatic play

- **Rhyme Time**
  - Music and movement
  - Phonological and phonemic awareness

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Language

• Semantic/vocabulary
• Compound/complex sentences
• Narrative
  – Character
  – Setting
  – Feeling
  – Problem
  – Resolution
• Sequencing
  – First, second, third
  – Beginning, middle, end
Phonological & Phonemic Awareness

• Long vs. short words
• Script – Cue for rhyme
• Repeated song
• Rhyme Games
  – Matching
  – Creation
  – Production
  – Oddity

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Phonological & Phonemic Awareness

- Segmenting
  - “Break it Down”
  - Compound words, syllables
  - CVC words
  - Letter-sound correspondence through counting e.g., magic wand, Elkonin cards

- Blending
Alphabetic Principle

• Recognizes name
• Recites alphabet song
• Points to letters
• Says letters
• Knows letter sound correspondence
Phonological Contrasts

- Word-final pre-vocalic consonant cluster reduction
  - “best” = [bes]
- Methathesis “ask” = aks
- Deletion of final /l/ or /r/ after the vowel /o/
  - “door” = “doe”
Morphosyntactic Contrasts

• Zero marking of plurals
• Zero possessives
• Absent copula
• Absent auxiliary

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Pragmatic Skills

- Listening
- Using a school voice
- Introductions
- Talking differently based on context
- Politeness
- Indirect requests
Suggestions for Effective Implementation

• Teacher Collaboration
• Short activities
• Techniques for smooth transitions
• Emphasis on Team Building
• Introduce themed related vocabulary
• Incorporation of media
Study 2. TALK: Results

• 13 children in TALK; 8 children in control classroom
• Evaluation included:
  – Pre & post testing.
  – Parent questionnaires.
  • Very positive responses from parent questionnaires
Study 2. TALK: Results

Comprehension of MAE

% correct on MAE comprehension task

<table>
<thead>
<tr>
<th></th>
<th>TALK curriculum</th>
<th>Control classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td></td>
<td></td>
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<tr>
<td>Morph contrast</td>
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<tr>
<td>Ambig. words</td>
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Study 2. TALK: Results

Phonological Awareness

<table>
<thead>
<tr>
<th>Standard score</th>
<th>Blending</th>
<th>Rhyming</th>
<th>Word Compl.</th>
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<tbody>
<tr>
<td>TALK curriculum</td>
<td><img src="chart1.png" alt="Bar Chart" /></td>
<td><img src="chart2.png" alt="Bar Chart" /></td>
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<tr>
<td>Control curriculum</td>
<td><img src="chart3.png" alt="Bar Chart" /></td>
<td><img src="chart4.png" alt="Bar Chart" /></td>
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Discussion

• In a relatively short period of time, the TALK curriculum was effective.
  • Authentic Assessment

• Need to follow children to see if it makes a difference.
General discussion and conclusions

• **Study 1**: Dialect mismatch between the home dialect and the language of instruction puts non-MAE speaking children at a disadvantage.
  • Difficulty with comprehension of words that are ambiguous in native dialect, but not in MAE.
  • Both expressive vocabulary size and dialect density independently predicted performance.
• **Study 2**: We can teach young children a lot about the language of instruction in a relatively short period of time.
• **Wonderful collaborators**: David Kaplan, Maryellen Macdonald, and Mark Seidenberg.

• **Research team**: Elisabeth Bownik, Ruby Braxton, Megan Brown, Alia Dayne, Brittany Manning, and Alissa Schneeberg.

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• **Most of all**: The parents who gave their consent and the children who participated in the project!!!