Poor talkers in the early school years

1. Failed to develop language as expected (despite otherwise typical development & opportunities)
   - Specific Language Impairment (SLI)
2. L1 is not the language of instruction
   - English Language Learners (ELLs)

SLI vs. ELL

- Difficult to distinguish
  - Grammatical errors (Paradis, 2005)
  - Vocabulary limitations (Golberg et al., 2008; Conti-Ramsden & Jones, 1997; August et al., 2005)
  - Perform similarly on standardized tests of language (Oller & Eilers, 2002)

Monolingual Advantage

<table>
<thead>
<tr>
<th></th>
<th>Monolingual</th>
<th>English Language Learners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typically developing language</td>
<td>✔️ ✔️</td>
<td>✔️  ✔️</td>
</tr>
<tr>
<td>Language impairment</td>
<td>✗</td>
<td>✗</td>
</tr>
</tbody>
</table>

Monolingual & TD > ELL & TD = Monolingual & LI > ELL & LI

Nonword Repetition

- Windsor et al. (2010)
  - 187 children 8-9 years

Monolingual TD > Bilingual TD = Monolingual LI > Bilingual LI
Sentence Recall

- Balilah & Archibald (SRCLD, 2011)
  - 1253 6-to-9 year old children

- Development

- Parent report

Parent Questionnaire

- Concern
  - Have you ever been concerned about this child’s language development?  Y  N
  - Have you ever been concerned about this child’s ability to learn to read?  Y  N

- Language spoken
  - Is English the first language your child learned?
    - If no, what other languages are spoken in this child’s home?

Parent concern

- High sensitivity for identifying SLI in preschoolers

- Referrals for SLP services have been used to identify impaired groups in previous studies

- No gold standard for identifying LI in multiple linguistic groups
  - English tests misidentify
  - Translated tests inappropriate

Development

- Typically development ELLs:
  - Improved language over time
  - 2 to 6 years

- Children with language-related impairments
  - Persistent language deficits

Sentence Recall across age bands

- Monolingual TD > ELL & TD = Monolingual LI > ELL & LI

Sentence Recall

- Monolingual no-concern
- Monolingual concern
- Bilingual no-concern
- Bilingual concern

Klee et al., 2008; Dollaghan & Campbell, 1998

Genesee et al., 2004; Jia & Fuse, 2007; Oller & Eilers, 2002; Goldberg et al., 2008; Snowling et al., 2001
Our Previous Findings

- Parent concern about language development
  - separated groups with stronger/weaker sentence recall
  - further validation – Pauls & Archibald (2012)
- No differences in sentence recall:
  - Monolingual children with parent concern
  - ELL without parent concern
  (although effect size largest in oldest group)

What about reading?

- Does parent concern about reading development separate good/poor readers/talkers?
- Do reading measures distinguish groups of interest:
  - Monolingual children with parental concern
  - ELL children without parental concern

Single Word Reading

- Reduced monolingual advantage
  - Basic vocabulary or nonwords
  - Learning of orthographic-phonemic correspondences
  - Metalinguistic awareness – bilingual advantage
    (Bialystok et al., 2003)

Measuring Single Word Reading

- Sight words
  - high frequency
  - Phonemic decoding -nonwords

Sight words:
- is
- the
- of
- as
- was
- wood
- shoes
- people
- crowd
- lat

Phonemic decoding:
- ip
- ga
- ko
- ta
- om
- ig
- ni
- pim
- wum

A Simple Model of Reading

ELL vs. Poor Reading?

- ELL = monolingual speakers (Chiappe & Siegel, 2006; Oller et al., 2007; Pugh et al., 2005)
  - word recognition
  - basic word decoding
  - phonological processing
- ELL < monolingual speakers in reading comprehension skills (U.S. Department of Education, 2005, 2007)
Development

• Typically development ELLs
  – Improved language over time
  – Single word reading may ceiling

• Children with language-related impairments
  – Persistent language deficits
  – Single word reading may gradually increase

Predictions

Idea

• Examine utility of single word reading measures in distinguishing monolingual and non-monolingual groups whose parents are/are not concerned about reading development

Method

• 34 schools; ~6000 invitations; SK to gr. 4
• 1081 aged 6 to 9 years
• Screening (local norms)
  – Sentence recall (Redmond, 2003)
  – Single word reading (TOWRE)
  - Sight word reading
  - Phonemic decoding (nonwords)
  – Math fluency (WJ-III)

Age Groups

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>Monolingual (No Concern)</th>
<th>Monolingual (Concern)</th>
<th>ELL (No Concern)</th>
<th>ELL (Concern)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6;0 – 6;11</td>
<td>163</td>
<td>35</td>
<td>27</td>
<td>10</td>
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<tr>
<td>7;0 – 7;11</td>
<td>224</td>
<td>60</td>
<td>19</td>
<td>14</td>
</tr>
<tr>
<td>8;0 – 8;11</td>
<td>193</td>
<td>68</td>
<td>20</td>
<td>15</td>
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<tr>
<td>9;0 – 9;11</td>
<td>154</td>
<td>46</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>734</td>
<td>209</td>
<td>88</td>
<td>50</td>
</tr>
</tbody>
</table>

Results

Sight Word Reading
**Summary**
- ELL achieved higher single word reading but lower sentence recall scores
- Parental concern identified groups with lower single word reading & sentence recall scores
- ELL, no concern > monolingual, with concern on single word reading but not sentence recall tasks

**Summary: Developmental Trends**
- Bilingual advantage on single word reading
  - Persists over early school years, & may grow
- Monolingual advantage on sentence recall
  - Persists at least 4 years,
  - But may diminish for children without parental concerns about language

**Implications?**
- Bilingual advantage in single word reading tasks
  - Exposure to 2 phonological systems
- Comparing performance on oral language & single word reading tasks
  - May aid in distinguishing ELL ± LI
- Limitations

**Thank you!**

**Collaborators:**
- Marc Joanisse
- Daniel Ansari
- Janis Oram Cardy

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